## **EXHIBIT 9**

## STATE OF MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY WATER RESOURCES DIVISION

| In the matter of:                                          | ACO-000131 Date Entered: |
|------------------------------------------------------------|--------------------------|
| City of Detroit Water and Sewerage Department 735 Randolph |                          |
| Detroit, Michigan 48226                                    |                          |

#### ADMINISTRATIVE CONSENT ORDER

This document results from allegations by the Department of Environmental Quality (DEQ), Water Resources Division (WRD). The DEQ alleges the City of Detroit Water and Sewerage Department (DWSD) as the owner and operator of the Detroit Wastewater Treatment Plant (WWTP) located at 9300 West Jefferson Avenue, Detroit, Michigan, 48209, Wayne County, is in violation of Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), MCL 324.3101 et seq. The DWSD is a person, as defined by Section 301 of the NREPA. The DWSD and the DEQ agree to resolve the alleged violations set forth herein through entry of an Administrative Consent Order (Consent Order).

#### I. STIPULATIONS

The DWSD and the DEQ stipulate as follows:

- 1.1 The NREPA MCL 324.101 <u>et seq.</u> is an act that controls pollution to protect the environment and natural resources in the state.
- 1.2 Pollution Control, Part 31, Water Resources Protection, of the NREPA (Part 31), MCL 324.3101 <u>et seq.</u>, and the rules promulgated pursuant thereto, provides for the protection, conservation, and the control of pollution of the water resources of the state.
- 1.3 The DEQ is authorized by Section 3112(4) of Part 31 of the NREPA to enter orders requiring persons to abate pollution, and the director of the DEQ may delegate this authority to a designee under Section 301(b) of the NREPA, MCL 324.301(b).

- 1.4 The DWSD consents to the issuance and entry of this Consent Order and stipulates that the entry of this Consent Order constitutes a final order of the DEQ and is enforceable as such under Section 3112(4) of Part 31. The DWSD agrees not to contest the issuance of this Consent Order, and that the resolution of this matter by the entry of this Consent Order is appropriate and acceptable. It is also agreed that this Consent Order shall become effective on the date it is signed by the chief of the WRD, delegate of the director, pursuant to Section 301(b) of the NREPA.
- 1.5 The DWSD and the DEQ agree that the signing of this Consent Order is for settlement purposes only and does not constitute an admission by the DWSD that the law has been violated.
- 1.6 The Signatory to this Consent Order on behalf of the DWSD agrees and attests that he is fully authorized to assure that the DWSD will comply with all requirements under this Consent Order.
- 1.7 The DWSD shall achieve compliance with the aforementioned regulations in accordance with the requirements contained in Section III, Compliance Program, of this Consent Order.

#### II. FINDINGS

- 2.1 The DWSD is authorized to discharge from the WWTP to the Detroit River and Rouge River set forth in National Pollution Discharge Elimination System (NPDES) Permit No. MI0022802 issued September 28, 2007, modified March 10, 2010, modified on May 10, 2010, and further modified on June 28, 2011.
- 2.2 The DWSD entered into the Second Amended Consent Judgment (SACJ) on August 3, 2000, to resolve the WWTP violations that occurred between August 1997 through March 1999. The SACJ required the DWSD to undertake a substantial capital construction program to replace and overhaul the solids dewatering equipment and other liquid plant processes, and contained other requirements the parties intended would

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- ensure long-term compliance. For the following nine years, the DWSD was in substantial compliance with the NPDES permit effluent limitations requirements.
- 2.3 On November 12, 2009, the DEQ issued Violation Notice VN-004326 to the DWSD for violations of the SACJ and the NPDES permit specified therein (attachment 1) resulting from excess solids inventory at the WWTP.
- 2.4 On April 14, 2010, the DEQ issued Second Violation Notice SVN-000341 to the DWSD for continued violations of the SACJ and the NPDES permit specified therein (attachment 2). The SVN directed the DWSD to submit a Corrective Action Plan (CAP) to address the violations.
- 2.5 On August 31, 2010, the DWSD submitted the CAP to the DEQ as required by the SVN-000341. Concurrently, the DWSD began implementation of short-term measures identified in the CAP, reduced the excess solids inventory at the WWTP to acceptable levels, and the effluent quality has improved.
- 2.6 As a condition of the SACJ termination, the WWTP shall continue to operate under the Consent Order executed between the DWSD and the DEQ. The DWSD and the DEQ agreed to the compliance program embodied into Section III of this Consent Order which encompasses short-term, intermediate, and long-term corrective actions to ensure for sustained long-term compliance at the WWTP and the NPDES permits.

#### III. COMPLIANCE PROGRAM

IT IS THEREFORE AGREED AND ORDERED THAT THE DWSD shall take the following actions to prevent further violations of Part 31:

A. Capacity for sludge dewatering, conveyance, and final disposal; Required maximum solids inventory loads.

- 3.1 The DWSD shall ensure that sludge dewatering equipment, sludge conveyance equipment and final sludge disposal capability is available at the Detroit WWTP as follows:
  - a. The DWSD shall ensure that the WWTP sludge dewatering equipment, sludge conveyance equipment, and final sludge disposal capability are 1) maintained for use; and 2) in good operational working order to meet the following requirements over the time periods specified:
    - Average capacity of 500 dry tons per day (dtpd), calculated as a calendar monthly average.
    - ii. Upon completion of replacement of C-I and C-II belt filter presses (BFPs) as required in III.B.3.2.a.vi., peak capacity of 850 dtpd, calculated as a 10-day average.
    - iii. The DWSD shall maintain the average monthly capacity and the peak 10-day average (once applicable). The peak 10-day average shall be available during any wet weather event when the Detroit WWTP is operated in the "Storm Period" of the currently approved WWTP Wet Weather Operational Plan as required by the NPDES Permit.

#### b. The DWSD shall also:

- i. Notify the DEQ within one business day if solids are recycled from the gravity thickeners to the head of the WWTP for more than 72 hours and provide an explanation for the recycled solids.
- ii. Maintain an annual average solids inventory not to exceed 750 dtpd, and maintain a calendar quarterly average solids inventory not to exceed 1000 dtpd.

- iii. Maintain compliance with all NPDES Permit effluent limitations.
- iv. The DWSD is allowed to submit to the DEQ for review and approval a request to modify this Consent Order to revise the numerical levels specified in items in paragraphs 3.1. This modification request shall include supporting rationale for the revised numerical levels.
- v. Request modifications in writing to the DEQ for review and approval in accordance with Section V, paragraph 5.1, of this Consent Order.

#### B. Solids Management Plan

- 3.2 The DWSD submitted to the DEQ for review and approval a short-term Solids Management Plan. This Solids Management Plan is designed to ensure the availability of sufficient sludge dewatering equipment, and sludge disposal capability to meet the capacity requirements specified in III.A.3.1.a.
  - a. The DWSD shall implement the short-term and near long-term actions of the Solids Management Plan improvements to C-I and C-II dewatering and incineration in accordance with the following schedule:
    - i. The DWSD submitted to the DEQ for review and approval the detailed Basis of Design Report for the replacement of C-I and C-II BFPs on December 22, 2010.
    - ii. On or before August 1, 2011, the DWSD shall submit to the DEQ for review and approval approvable final plans and specifications consistent with the approved Basis of Design Report for the replacement of C-I and C-II BFPs.
    - iii. On or before December 31, 2011, the DWSD shall complete the renovation of eight BFPs located in C-I and/or C-II.

- iv. On or before September 1, 2012, the DWSD shall commence construction and installation of the C-I and C-II BFPs in accordance with the DEQ-approved final plans and specifications referenced in paragraph 3.2. a. ii.
- v. On or before November 30, 2014, the DWSD shall complete repairs to C-I and C-II incinerators under PC-774.
- vi. On or before January 1, 2016, the DWSD shall complete construction and place into full operation and service the C-I and C-II BFPs referenced in paragraph 3.2. a. iv.
- vii. The DWSD shall regularly renovate the C-II centrifuges after ten thousand operational hours of operation.
- viii. The DWSD shall submit a written report to the DEQ annually on July 31 identifying centrifuges that were renovated, the date when the renovated centrifuges were taken out of service and the date the centrifuges were returned back into service.
- b. On or before June 1, 2012, the DWSD shall submit to the DEQ for review and approval a schedule for development of a Long-term Solids Disposal Plan (LTSDP). The LTSDP shall include provisions to ensure long-term compliance with all NPDES permit requirements, including but not limited to, necessary redundancy and contingencies for effective solid disposal or reuse. Upon DEQ approval, the LTSDP development schedule shall be incorporated by reference into this Consent Order and may be incorporated into the NPDES permit. The DWSD is advised that implementation of individual elements of the LTSDP may require Part 41 wastewater construction permits or may require other DEQ approvals.

#### C. Steering Committee

3.3. The City and the DWSD shall maintain the Empowered Enterprise Change Office (EECO) until the termination of this Consent Order or by mutual written agreement between the City, the DWSD, and the DEQ. The EECO comprises senior leadership from the Mayor's Office and the City's Human Resources, Law and Purchasing Departments and serves as an internal steering and facilitation team. The leadership provided by the EECO is intended to facilitate the achievement of long-term sustainable compliance with the NPDES permit.

#### D. Maintenance

- 3.4 On or before July 31, 2012, the DWSD shall submit to the DEQ for review and approval a Preventive Maintenance Plan (PMP) for the Detroit WWTP that includes maintenance metrics and targets to evaluate the effectiveness of and adherence to the PMP, along with a schedule for implementing the PMP. The PMP shall be designed to ensure that the DWSD has enough equipment operable and available to adequately treat all incoming wastewater to meet all effluent limitations, conditions, and requirements and to ensure that the solids inventory is managed in accordance with paragraph 3.1.b.ii. The DWSD shall implement the PMP in accordance with the following schedule:
  - a. <u>Upon DEQ approval</u>, the maintenance metrics, targets and implementation schedule shall be incorporated by reference into this Consent Order and may be incorporated into the NPDES permit.
  - b. The reporting frequency for these maintenance metrics is specified in paragraph 3.9. through 3.10. in this section.
  - c. On or before January 1, 2013, the DWSD shall submit to the DEQ for review and approval a complete and updated online Operation and Maintenance (O&M) Manual for existing equipment and facilities. Upon DEQ approval, the O&M

Manual shall be maintained and updated in accordance with the requirements of the NPDES permit.

#### E. Management

- 3.5. On or before October 1, 2011, the DWSD shall submit to the DEQ for review and approval an Operations Performance Plan (OPP) that includes management metrics and targets for measuring the operational performance of the Wastewater Operations Group (WWOG).
  - a. <u>Upon DEQ approval</u>, these metrics and targets will be incorporated by reference into this Consent Order and may be incorporated into the NPDES permit.
  - b. The reporting frequency for these metrics and targets is specified in paragraphs 3.9. through 3.10. in this section.
  - c. The DWSD shall request modifications in writing to the DEQ for review and approval in accordance with Section V, paragraph 5.1, of this Consent Order.

#### F. Staffing

3.6 The DWSD shall ensure that the WWOG is adequately staffed to properly operate and maintain the Detroit WWTP and Combined Sewer Overflow (CSO) facilities in accordance with the NPDES permit. The DWSD shall develop a Staffing Plan to establish a minimum staffing level for the WWOG that includes DWSD employees and contractual skilled trades, identify the basis for determining the minimum number of maintenance and operations staff necessary to properly operate and maintain the Detroit WWTP and CSO facilities and a strategy for successful succession planning and training to ensure competent staff. Adequate staffing will be achieved and maintained in accordance with the following schedule:

- a. On or before August 31, 2011, the DWSD shall submit to the DEQ for review and approval a Staffing Plan for the WWOG. Upon DEQ approval, the Staffing Plan will be incorporated by reference into this Consent Order.
- b. On or before October 1, 2011, the DWSD shall increase staffing to 85 percent of the minimum staffing level based on the DEQ-approved Staffing Plan.
- c. On or before October 1, 2012, the DWSD shall increase staffing to 90 percent of the minimum staffing level based on the DEQ-approved Staffing Plan.
- d. <u>Beginning October 1, 2013</u>, until the termination of this Consent Order, the DWSD shall maintain staffing at not less than 95 percent of the minimum staffing level specified the DEQ-approved staffing plan on an annual average basis, provided that this level is sufficient to maintain compliance with the NPDES permit.
- e. The minimum staffing level may be revised by mutual agreement in writing and incorporated by reference into this Consent Order.
- f. The reporting frequency for these metrics is specified in paragraph 3.9. through 3.10. in this section.

#### G. Capital Planning Process

- 3.7 The DWSD shall establish and implement an effective capital planning process for the Detroit WWTP that allows for sustained compliance with the NPDES permit and this Consent Order as follows:
  - a. On or before December 31, 2011, the DWSD shall submit to the DEQ for review and approval a summary of the Capital Planning Process that includes a requirement to periodically complete a Needs Assessment (NA) of the WWTP, CSO facilities, and collection system pump stations at least once every 3 years until termination of this order. The NA shall substantially follow the format and

the level of detail contained in the 2010 NA, dated August 2010. The Capital Planning Process and the resulting Capital Improvement Plan shall be consistent with the approved LTSDP as well as ongoing operational needs, ensure that there are sufficient resources to fully implement and support it, and ensure that equipment is repaired, rehabilitated, or replaced as needed in order to maintain compliance with the NPDES permit and this Consent Order. The Capital Planning Process shall be implemented upon DEQ approval.

- b. On or before December 31, 2011, the DWSD shall submit to the DEQ for review and approval a report identifying metrics and targets to measure the effectiveness of the Detroit WWTP Capital Planning Process.
- c. <u>Upon DEQ approval</u>, the metrics and targets will be incorporated by reference into this Consent Order and may be incorporated into the NPDES permit.
- d. The reporting frequency for these metrics and targets is specified in paragraph 3.9. through 3.10. in this section.

#### H. Purchasing

- 3.8 On or before October 31, 2011, the DWSD shall submit to the DEQ for review and approval Purchasing metrics and targets for the WWOG.
  - a. <u>Upon DEQ approval</u>, these metrics and targets will be incorporated by reference into this Consent Order.
  - b. The reporting frequency for these metrics and targets is specified in paragraph 3.9. through 3.10. in this section.

#### I. Reporting

- 3.9 The DWSD shall submit to the DEQ monthly graphical summaries that include information provided in the current Key Indicator Report by the 10<sup>th</sup> day of the following month, and provide electronic copies to the counties of Wayne, Oakland, and Macomb on the 20th day of the following month. Data supporting the graphical summary shall be made available to DEQ and the counties of Wayne, Oakland, and Macomb upon request.
- 3.10 The DWSD shall submit to the DEQ quarterly reports on the status of its implementation of the compliance program outlined in paragraphs 3.1. to 3.8. in this section and provide electronic copies to the counties of Wayne, Oakland, and Macomb by the 30<sup>th</sup> day of the month following the end of the reporting quarter. The reporting quarters are as follows: January 1<sup>st</sup> through March 31<sup>st</sup>; April 1<sup>st</sup> through June 30<sup>th</sup>; July 1<sup>st</sup> through September 30<sup>th</sup>; and October 1<sup>st</sup> through December 31<sup>st</sup>. The reports shall include the following:
  - a. The status of the DWSD's compliance with paragraphs 3.1.to 3.8. in this section.
  - b. A summary of all approved metrics, and targets for Maintenance, Management, Staffing, Capital Improvement Plan, and Purchasing. Note: reporting metrics shall begin with the first quarterly report following the quarter in which they were approved.
  - c. The reports identified in this item may be revised by mutual agreement between DWSD and DEQ to delete, add or adjust measures to the report to better represent the circumstances as the compliance program progresses. The counties of Wayne, Oakland, and Macomb shall be notified of any revisions.
  - d. All reports required under this Consent Order are required until the termination of this Consent Order.

3.11 The DWSD shall submit all reports, work plans, specifications, schedules, or any other writing required by this section to the Southeast Michigan District Supervisor, WRD, DEQ, 27700 Donald Court, Warren Michigan 48092-2793. The cover letter with each submittal shall identify the specific paragraph and requirement of this Consent Order that the submittal is intended to satisfy.

#### IV. DEQ APPROVAL OF SUBMITTALS

- 4.1 For any work plan, proposal, or other document, excluding applications for permits or licenses, that are required by this Consent Order to be submitted to the DEQ by the DWSD, the following process and terms of approval shall apply.
- 4.2 All work plans, proposals, and other documents required to be submitted by this Consent Order shall include all of the information required by the applicable statute and/or rule, if any, and all of the information required by the applicable paragraph(s) of this Consent Order.
- 4.3 In the event the DEQ disapproves a work plan, proposal, or other document, it will notify the DWSD, in writing, specifying the reasons for such disapproval. The DWSD shall submit, within 30 days of receipt of such disapproval, a revised work plan, proposal, or other document which adequately addresses the reasons for the DEQ's disapproval. If the revised work plan, proposal, or other document is still not acceptable to the DEQ, the DEQ will notify the DWSD of this disapproval.
- 4.4 In the event the DEQ approves with specific modifications, a work plan, proposal, or other document, it will notify the DWSD, in writing, specifying the modifications required to be made to such work plan, proposal, or other document prior to its implementation and the specific reasons for such modifications. The DEQ may require the DWSD to submit, prior to implementation and within 30 days of receipt of such approval with specific modifications, a revised work plan, proposal, or other document which adequately

- addresses such modifications. If the revised work plan, proposal, or other document is still not acceptable to the DEQ, the DEQ will notify the DWSD of this disapproval.
- 4.5 Upon DEQ approval, or approval with modifications, of a work plan, proposal, or other document, such work plan, proposal, or other document shall be incorporated by reference into this Consent Order and shall be enforceable in accordance with the provisions of this Consent Order.
- 4.6 Failure by the DWSD to submit an approvable work plan, proposal, or other document, within the applicable time periods specified above, constitutes a violation of this Consent Order and shall subject the DWSD to the enforcement provisions of this Consent Order, including the stipulated penalty provisions specified in paragraph 9.5.
- 4.7 Any delays caused by the DWSD's failure to submit an approvable work plan, proposal, or other document when due shall in no way affect or alter the DWSD's responsibility to comply with any other deadline(s) specified in this Consent Order.
- 4.8 No informal advice, guidance, suggestions, or comments by the DEQ regarding reports, work plans, plans, specifications, schedules or any other writing submitted by the DWSD will be construed as relieving the DWSD of its obligation to obtain written approval, if and when required by this Consent Order.

#### V. EXTENSIONS

- 5.1 The DWSD and the DEQ agree that the DEQ may grant the DWSD a reasonable extension of the specified deadlines set forth in this Consent Order. Any extension shall be preceded by a written request in duplicate to the DEQ, WRD, Enforcement Unit Chief, Constitution Hall, 525 West Allegan Street, Lansing, Michigan 48909-7773, and the Southeast Michigan District Supervisor at the address in paragraph 3.11, no later than ten business days prior to the pertinent deadline, and shall include:
  - a. Identification of the specific deadline(s) of this Consent Order that will not be met.

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- b. A detailed description of the circumstances that will prevent the DWSD from meeting the deadline(s).
- c. A description of the measures the DWSD has taken and/or intends to take to meet the required deadline.
- d. The length of the extension requested and the specific date on which the obligation will be met.

The district supervisor, in consultation with the Enforcement Unit Chief, shall respond in writing to such requests. No change or modification to this Consent Order shall be valid unless in writing from the DEQ, and if applicable, signed by both parties.

#### VI. REPORTING

6.1 The DWSD shall verbally report any violation(s) of the terms and conditions of this Consent Order to the Southeast Michigan District Supervisor by no later than the close of the next business day following detection of such violation(s) and shall follow such notification with a written report within five business days following detection of such violation(s). The written report shall include a detailed description of the violation(s), as well as a description of any actions proposed or taken to correct the violation(s). The DWSD shall report any anticipated violation(s) of this Consent Order to the above-referenced individual in advance of the relevant deadlines whenever possible.

#### VII. RETENTION OF RECORDS

7.1 Upon request by an authorized representative of the DEQ, the DWSD shall make available to the DEQ all records, plans, logs, and other documents required to be maintained under this Consent Order or pursuant to Part 31 or its rules. All such documents shall be retained by the DWSD for at least a period of three years from the date of generation of the record unless a longer period of record retention is required by Part 31 or its rules.

#### VIII. RIGHT OF ENTRY

8.1 The DWSD shall allow any authorized representative or contractor of the DEQ, upon presentation of proper credentials, to enter upon the premises of the facility at all reasonable times for the purpose of monitoring compliance with the provisions of this Consent Order. This paragraph in no way limits the authority of the DEQ to conduct tests and inspections pursuant to the NREPA and the rules promulgated thereunder, or any other applicable statutory provision.

#### **IX. PENALTIES**

- 9.1 The DWSD agrees to pay to the State of Michigan FORTY SIX THOUSAND (\$46,000) DOLLARS as partial compensation for the cost of investigations and enforcement activities arising from the violations specified in Section II of this Consent Order. Payment shall be made within 30 days of the effective date of this Consent Order in accordance with paragraph 9.8.
- 9.2 The DWSD agrees to conduct a Supplemental Environmental Project (SEP) that meets the requirements of the DEQ's policy and procedure titled Supplemental Environmental Projects for Penalty Mitigation Number: 04-002 after approval is received from the DEQ as mitigation for a portion of the civil fine. The value of the SEP, as determined by the DEQ, shall be not less than \$100,000. The DWSD shall submit a proposed SEP not later than 60 days after the effective date of this Consent Order. However, in the event that the DWSD and DEQ can not agree on the substance of the SEP within 120 days after the effective date of this Consent Order, the SEP component of this Consent Order shall be void. The DWSD shall submit a fine in the amount of \$31,500 to the DEQ not later than 30 days after receipt of a written notice from the DEQ voiding the SEP component and asserting a demand for payment. Denial and voiding a SEP by the DEQ and the civil fine in this section shall not be subject to judicial review.
- 9.3 For each failure to comply with any requirements contained under paragraph 3.1 of this

Consent Order, the DWSD shall pay stipulated penalties of \$5,000.

- 9.4 Except as provided in paragraph 9.3, for each failure to comply with a specific deadline contained in Section III of this Consent Order, the DWSD shall pay stipulated penalties of \$5,000. If, after 30 days from the original deadline, the DWSD has not fully corrected the violation, stipulated penalties shall begin to accrue in accordance with paragraph 9.5 of this Consent Order.
- 9.5 Except as provided for in paragraph 9.3 and 9.4, for each failure to comply with a provision of Section III or IV of this Consent Order, DWSD shall pay stipulated penalties of \$500 per violation per day for 1 to 7 days of violation, \$1,000 per violation per day for 8 to 14 days of violation, and \$2,000 per violation per day for each day of violation thereafter.
- 9.6 For each failure to comply with a provision of Section VI, VII, or VIII of this Consent Order, or any other requirement of this Consent Order, the DWSD shall pay stipulated penalties of \$1,000 per violation per day for each day of violation.
- 9.7 To ensure timely payment of the above civil fine, costs, and stipulated penalties, the DWSD shall pay an interest penalty to the General Fund of the State of Michigan each time it fails to make a complete or timely payment. This interest penalty shall be based on the rate set forth at MCL 600.6013(8), using the full increment of amount due as principal, and calculated from the due date for the payment until the delinquent payment is finally made in full.
- 9.8 The DWSD agrees to pay all funds due pursuant to this agreement by check made payable to the State of Michigan and delivered to the DEQ, Revenue Control Unit, P.O. Box 30657, Lansing, Michigan 48909-8157. To ensure proper credit, all payments made pursuant to this Consent Order must include the **Payment Identification No.** WTR 2000.
- 9.9 The DWSD agrees not to contest the legality of the civil fine or costs paid pursuant to paragraphs 9.1, and 9.2, above. The DWSD further agrees not to contest the legality of

any stipulated penalties or interest penalties assessed, pursuant to paragraphs 9.3, 9.4, 9.5, 9.6, and 9.7, above, but reserves the right to dispute the factual basis upon which a demand by the DEQ for stipulated penalties or interest penalties is made.

#### X. FORCE MAJEURE

- 10.1 The DWSD shall perform the requirements of this Consent Order within the time limits established herein, unless performance is prevented or delayed by events that constitute a "Force Majeure." Any delay in the performance attributable to a "Force Majeure" shall not be deemed a violation of the DWSD's obligations under this Consent Order in accordance with this section.
- 10.2 For the purpose of this Consent Order, "Force Majeure" means an occurrence or nonoccurrence arising from causes not foreseeable, beyond the control of, and without the fault of the DWSD, such as: an Act of God, untimely review of permit applications or submissions by the DEQ or other applicable authority, and acts or omissions of third parties that could not have been avoided or overcome by the DWSD's diligence and that delay the performance of an obligation under this Consent Order. "Force Majeure" does not include, among other things, unanticipated or increased costs, changed financial circumstances, or failure to obtain a permit or license as a result of the DWSD's actions or omissions.
- 10.3 The DWSD shall notify the DEQ, by telephone, within 48 hours of discovering any Force Majeure event that causes a delay in its compliance with any provision of this Consent Order. Verbal notice shall be followed by written notice within ten calendar days and shall describe, in detail, the anticipated length of delay, the precise cause or causes of delay, the measures taken by the DWSD to prevent or minimize the delay, and the timetable by which those measures shall be implemented. The DWSD shall adopt all reasonable measures to avoid or minimize any such delay.
- 10.4 Failure of the DWSD to comply with the notice requirements and time provisions under paragraph 10.3 shall render this Section X void and of no force and effect as to the

particular incident involved. The DEQ may, at its sole discretion and in appropriate circumstances, waive in writing the notice requirements of paragraph 10.3, above.

- 10.5 If the parties agree that the delay or anticipated delay was beyond the control of the DWSD, this may be so stipulated, and the parties to this Consent Order may agree upon an appropriate modification of this Consent Order. However, the DEQ is the final decision-maker on whether or not the matter at issue constitutes a force majeure. The parties to this Consent Order understand and agree that the final decision by the DEQ regarding a force majeure claim is not subject to judicial review. The burden of proving that any delay was beyond the reasonable control of the DWSD, and that all the requirements of this Section X have been met by the DWSD, rests with the DWSD.
- 10.6 An extension of one compliance date based upon a particular incident does not necessarily mean that the DWSD qualifies for an extension of a subsequent compliance date without providing proof regarding each incremental step or other requirement for which an extension is sought.

#### XI. GENERAL PROVISIONS

- 11.1 With respect to any violations not specifically addressed and resolved by this Consent Order, the DEQ reserves the right to pursue any other remedies to which it is entitled for any failure on the part of the DWSD to comply with the requirements of the NREPA and its rules.
- 11.2 The DEQ and the DWSD consent to enforcement of this Consent Order in the same manner and by the same procedures for all final orders entered pursuant to Part 31, MCL 324.3101 <u>et seq.</u>; and enforcement pursuant to Part 17, Michigan Environmental Protection Act, of the NREPA, MCL 324.1701 <u>et seq.</u>
- 11.3 This Consent Order in no way affects the DWSD's responsibility to comply with any other applicable state, federal, or local laws or regulations.

- 11.4 The WRD reserves its right to pursue appropriate action, including injunctive relief to enforce the provisions of this Consent Order, and at its discretion, may also seek stipulated fines or statutory fines for any violation of this Consent Order. However, the WRD is precluded from seeking both a stipulated fine under this Consent Order and a statutory fine for the same violation.
- 11.5 Nothing in this Consent Order is or shall be considered to affect any liability the DWSD may have for natural resource damages caused by the DWSD's ownership and/or operation of the facility. The State of Michigan does not waive any rights to bring an appropriate action to recover such damages to the natural resources.
- 11.6 In the event the DWSD sells or transfers the facility, it shall advise any purchaser or transferee of the existence of this Consent Order in connection with such sale or transfer. Within 30 calendar days, the DWSD shall also notify the WRD Southeast Michigan District Supervisor, in writing, of such sale or transfer, the identity and address of any purchaser or transferee, and confirm the fact that notice of this Consent Order has been given to the purchaser and/or transferee. The purchaser and/or transferee of this Consent Order must agree, in writing, to assume all of the obligations of this Consent Order. A copy of that agreement shall be forwarded to the WRD Southeast Michigan District Supervisor within 30 days of assuming the obligations of this Consent Order.
- 11.7 The provisions of this Consent Order shall apply to and be binding upon the parties to this action, and their successors and assigns.
- 11.8 This Consent Order constitutes a civil settlement and satisfaction as to the resolution of the violations specifically addressed herein; however, it does not resolve any criminal action that may result from these same violations.

#### XII. TERMINATION

12.1 This Consent Order shall remain in full force and effect until terminated by a written Termination Notice (TN) issued by the DEQ. Prior to issuance of a written TN, the DWSD

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shall submit a request consisting of a written certification that the DWSD has fully complied with the requirements of this Consent Order and has made payment of any fines, including stipulated penalties, required in this Consent Order. Specifically, this certification shall include:

- a. The date of compliance with each provision of the compliance program in Section
   III, and the date any fines or penalties were paid.
- A statement that all required information has been reported to the district supervisor.
- Confirmation that all records required to be maintained pursuant to this Consent
   Order are being maintained at the facility.

The DEQ may also request additional relevant information. The DEQ shall not unreasonably withhold issuance of a TN.

#### **Signatories**

The undersigned CERTIFY they are fully authorized by the party they represent to enter into this Consent Order to comply by consent and to EXECUTE and LEGALLY BIND that party to it.

#### DEPARTMENT OF ENVIRONMENTAL QUALITY

| William Creal, Chief<br>Water Resources Division                                                                                                         |                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| Date                                                                                                                                                     |                                                      |
| CITY OF DETROIT                                                                                                                                          | DETROIT WATER AND SEWERAGE DEPARTMENT  Many In Maine |
| By: Chris Brown<br>Title: Chief Operating Officer                                                                                                        | By: Darry A. Latimer Title: Deputy Director          |
| Date                                                                                                                                                     | Date                                                 |
| APPROVED AS TO FORM:                                                                                                                                     |                                                      |
| By: Pamela Stevenson, Assistant Attorn<br>For: S. Peter Manning, Chief<br>Environment, Natural Resources, and A<br>Michigan Department of Attorney Gener | griculture Division                                  |
| Date                                                                                                                                                     |                                                      |

#### **Signatories**

The undersigned CERTIFY they are fully authorized by the party they represent to enter into this Consent Order to comply by consent and to EXECUTE and LEGALLY BIND that party to it.

#### **DEPARTMENT OF ENVIRONMENTAL QUALITY**

| William Creal, Chief<br>Water Resources Division                                                                                                                 | <del>-</del><br>-                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| Date                                                                                                                                                             |                                                      |
| CITY OF DETROIT                                                                                                                                                  | DETROIT WATER AND SEWERAGE<br>DEPARTMENT             |
| By Chris Brown Title: Chief Operating Officer 7811                                                                                                               | By: Darryl Latimer Title: Department Deputy Director |
| APPROVED AS TO FORM:                                                                                                                                             | Date                                                 |
|                                                                                                                                                                  | ·                                                    |
| By: Pamela Stevenson, Assistant Attorney<br>For: S. Peter Manning, Chief<br>Environment, Natural Resources, and Agric<br>Michigan Department of Attorney General |                                                      |
| Date                                                                                                                                                             |                                                      |

#### **Signatories**

The undersigned CERTIFY they are fully authorized by the party they represent to enter into this Consent Order to comply by consent and to EXECUTE and LEGALLY BIND that party to it.

#### **DEPARTMENT OF ENVIRONMENTAL QUALITY**

Environment, Natural Resources, and Agriculture Division

Mighigan Department of Attorney General

| i 10 0                                                                     |                                                      |  |  |  |
|----------------------------------------------------------------------------|------------------------------------------------------|--|--|--|
| William Creal, Chief                                                       | _                                                    |  |  |  |
| Water Resources Division                                                   |                                                      |  |  |  |
| •                                                                          |                                                      |  |  |  |
| 7-8-//<br>Date                                                             |                                                      |  |  |  |
| CITY OF DETROIT                                                            | DETROIT WATER AND SEWERAGE<br>DEPARTMENT             |  |  |  |
|                                                                            |                                                      |  |  |  |
| By: Chris Brown Title: Chief Operating Officer                             | By: Darryl Latimer Title: Department Deputy Director |  |  |  |
| Date                                                                       | Date                                                 |  |  |  |
| APPROVED AS TO FORM:                                                       |                                                      |  |  |  |
| Tamela J. Delever                                                          |                                                      |  |  |  |
| By: Pamela J. Stevenson, Assistant Attorne<br>For: S. Peter Manning, Chief | ey General                                           |  |  |  |
| rui, o. ratai Maining, Onai                                                |                                                      |  |  |  |



# STATE OF MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY SOUTHEAST MICHIGAN DISTRICT OFFICE



November 12, 2009

#### CERTIFIED MAIL

Ms. Pamela Turner, Director City of Detroit Water and Sewerage Department 735 Randolph Street Detroit, MI 48226-2830 VN No. VN-004326

Dear Ms. Turner:

SUBJECT: Violation Notice

Detroit Wastewater Treatment Plant NPDES Permit No. MI0022802

The Department of Environmental Quality (DEQ), Water Bureau (WB), has been notified that the City of Detroit Water and Sewerage Department (DWSD) is in violation of Part 31 of the Natural Resources and Environmental Protection Act (NREPA) 1994 PA 451, as amended, and National Pollutant Discharge Elimination System (NPDES) Permit No. MI0022802, which was issued on September 28, 2007, effective January 1, 2008.

The DWSD reported the following Total Suspended Solids (TSS) monitoring violations for Monitoring Point 049B occurring In September 2009. These monitoring results are violations of your permit.

| DATE           | PARAMETER PERMIT LIMIT    |         | REPORTED |
|----------------|---------------------------|---------|----------|
|                |                           |         | VALUE    |
| 9/11/2009      | TSS 7-Day Average         | 45 mg/l | 47 mg/l  |
| 9/12/2009      | TSS 7-Day Average         | 45 mg/l | 54 mg/l  |
| 9/13/2009      | TSS 7-Day Average         | 45 mg/l | 47 mg/l  |
| September 2009 | TSS Minimum Monthly % 85% |         | 81.1%    |
|                | Removal                   | , ,     |          |

The Second Amended Consent Judgment (SACJ) established a compliance program to improve the process equipment used to manage solids inventory at the Detroit Wastewater Treatment Plant (WWTP) so that solids could be removed from the treatment process at a rate that would ensure proper operations and compliance with NPDES permit effluent limits. DWSD has completed all of the projects in the August 2000 "Plan for Long-Term Measures to Ensure Compliance with Permit Requirements" (Plan) for improvements to the equipment for processing and disposing of solids and was effectively managing its solids inventory until May 2009.

Detroit Wastewater Treatment Plant NPDES Permit No. MI0022802 VN-004326

During a July 9, 2009 compliance inspection, Detroit Wastewater Treatment Plant (WWTP) reported that 9 belt filter presses and 7 centrifuges were out of service. WB staff expressed concern that with so many pieces of dewatering equipment out of service the DWWTP did not have sufficient dewatering capacity available to maintain solids inventories at acceptable levels. This concern increased as Key Indicator Reports showed increasing levels of Total Suspended Solids (TSS) in the Main Plan influent (MPI) through July and August.

On August 12, 2009, WB staff accompanied staff from the Department's Air Quality Division (AQD) on an odor investigation at the Detroit WWTP. At that time, the primary sludge thickeners were septic. The effluent from the secondary sludge thickeners had a somewhat septic odor as well.

On August 13, 2009, Jodi Peace and I met with Stephen Kuplicki and Jared Richards at the WWTP to get a better understanding of the cause of the high solids loadings and to find out what steps were being taken to reduce the solids inventory before it resulted in effluent limit violations. It was our understanding at the time that DWSD was making every effort to reduce the solids inventory in the WWTP as quickly as possible and that additional dewatering units would be returned to service by the end of the month, providing additional capacity toward that end.

The November 1, 2009, SACJ Comprehensive Plan and Program Update indicates that the WWTP has maintained high sludge inventory levels for the past 2 quarters. The report attributes this high inventory to a high influx of solids during an extended wet weather period during the first half of the year while overhauling dewatering equipment in all three dewatering areas. The situation was compounded by low flows in the 3<sup>rd</sup> quarter that brought in solids that were septic and therefore more difficult to dewater. The report also indicates that the secondary sludge inventory was reduced to normal levels during the 3<sup>rd</sup> quarter of 2009. However, the primary solids inventory remains high.

The violations identified in this Violation Notice are violations of Part 31, NPDES Permit No. MI0022802 and the Second Amended Consent Judgment.

The DWSD should take immediate action to achieve and maintain compliance with the terms and conditions of Part 31, NPDES Permit No. MI0022802 and the Second Amended Consent Judgment.

The violations identified above have caused the Department to consider reinstating the requirements of Paragraph II.A.1.b of the SACJ. Upon receipt of this notice please contact this office to schedule a meeting for the earliest possible date to discuss the corrective actions that have been and will be taken to address the cause of the violations identified above and ensure long term compliance with NPDES permit limits. The corrective action plan should include operation and maintenance targets to ensure that the WWTP has sufficient solids dewatering equipment available at all times to manage its solids inventory.

If you have any factual information you would like us to consider regarding the violations identified in this Notice, please provide them when we meet.

Detroit Wastewater Treatment Plant NPDES Permit No. MI0022802 VN-004326

We anticipate and appreciate your cooperation in resolving this matter. If you have any questions regarding this Notice please contact Jodi Peace at the number below,

Sincerely,

Phil Argiroff, District Supervisor

Whit ayuril

Public Wastewater & Drinking Water Unit

Water Bureau

#### ADDRESS FOR FURTHER CORRESPONDENCE

Jodi Lynn Peace Senior Environmental Quality Analyst Public Wastewater & Drinking Water Unit Water Bureau 586-753-3783

cc: Stephen Kuplicki, DWSD
Jared Richards, DWSD
Pamela J. Stevenson, DAG
Pete Ostlund, WB
Mr. Barry Selden: WB
Compliance File

WATER DIVISION

NOV 1 3 2009

ENFORCEMENT



#### STATE OF MIGHIGAN

#### DEPARTMENT OF NATURAL RESOURCES & ENVIRONMENT

JENNIFER M. GRANHOLM GOVERNOR SOUTHEAST MIGHIGAN DISTRICT OFFICE

REBECCA A. HUMPHRIES

April 14, 2010

#### CERTIFIED MAIL

Ms. Pamela Turner, Director
City of Detroit Water and Sewerage Department
735 Randolph Street
Detroit, MI 48226-2830

SVN No. SVN-000341

Dear Ms. Turner:

SUBJECT:

Second Violation Notice

Detroit Wastewater Treatment Plant NPDES Permit No. MI0022802

The Department of Natural Resources and Environment (DNRE), Water Bureau (WB), Issued a Violation Notice, VN No. VN-004326 on November 12, 2009, in response to violations of Parts 31 and 41 of the Natural Resources and Environmental Protection Act (NREPA) 1994 PA 451, as amended, the Second Amended Consent Judgment (SACJ) entered August 3, 2000 and National Pollutant Discharge Elimination System (NPDES) Permit No. MI0022802, which was issued on September 28, 2007, effective January 1, 2008. The City of Detroit Water and Sewerage Department (DWSD) has not returned to compliance.

The violations identified in Violation Notice VN-004326 are continuing. Key Indicator Reports submitted by the DWSD indicate that despite an increase in reported dewatering capacity, solids inventories have increased since the Violation Notice was issued and currently stand at roughly four times the desired amount. The Department is concerned that these high solids inventories will likely cause further violations during the impending wet weather season.

The DWSD's inability to remove solids from the treatment process at a rate that ensures proper operations and compliance with NPDES permit effluent limits is the same issue that caused the violations that resulted in the need for the SACJ.

The following violations have been identified since the Violation Notice was issued.

The DWSD reported the following Total Suspended Solids (TSS), Total PCB and Total Mercury monitoring violations for Monitoring Points 049B, 049F and 050A occurring in October, November and December 2009 and January, February and March 2010. These monitoring results are violations of your permit.

27700 DONALD COURT • WARREN, MICHIGAN 48092-2793
www.michigan.gov/dnre • (586) 753-3700
Printed by members of:

| DATE          | OUTFALL | PARAMETER                           | PERMIT        | REPORTED      |
|---------------|---------|-------------------------------------|---------------|---------------|
| 0.11          | 1000    |                                     | LIMIT         | VALUE         |
| October 2009  | 049B    | TSS Minimum Monthly % Removal       | 85%           | 79.6%         |
| 11/21/09      | 049B    | TSS Max 7-Day Avg.                  | 45 mg/l       | 55 mg/l       |
| 11/22/09 .    | 049B    | TSS Max 7-Day Avg.                  | 45 mg/l       | 67 mg/l       |
| 11/23/09      | 049B    | TSS Max 7-Day Avg.                  | 45 mg/l       | 70 mg/l       |
| 11/24/09      | 049B    | TSS Max 7-Day Avg.                  | 45 mg/l       | 75 mg/l       |
| 11/24/09      | 049B    | TSS Max 7-Day Avg.                  | 349000 lb/day | 349757 lb/day |
| 11/25/09      | .049B   | TSS Max 7-Day Avg.                  | 45 mg/l       | 73·mg/l       |
| 11/26/09      | 049B    | TSS Max 7-Day Avg.                  | 45 mg/l       | 71 mg/l       |
| 11/27/09      | 049B    | TSS Max 7-Day Avg.                  | 45 mg/l       | 75 mg/l       |
| 11/28/09      | 049B    | TSS Max 7-Day Avg.                  | 45 mg/l       | 64 mg/l       |
| 11/29/09      | 049B    | TSS Max 7-Day Avg.                  | 45 mg/l       | 59 mg/l       |
| 11/30/09      | 049B    | TSS Max 7-Day Avg.                  | 45 mg/l       | 65 mg/l       |
| November 2009 | 049B    | TSS Max Monthly Avg.                | 30 mg/l       | 46 mg/l       |
| November 2009 | 049B    | TSS Min Monthly % Removal           | 85%           | 74.6%         |
| November 2009 | 049F ·  | PCB Max Monthly Avg.                | 0.0002 lb/day | 1.08 lb/day   |
| November 2009 | 049F    | PCB Max Monthly Avg.                | 0.000026 ug/l | 0,21 ug/l     |
| 12/7/09       | 049B    | TSS Max 7-Day Avg.                  | 45 mg/l       | 61 mg/l       |
| December 2009 | 049B    | TSS Min Monthly<br>% Removal        | 85%           | 79%           |
| December 2009 | 049F    | PCB Max Monthly Avg.                | 0.0002 lb/day | 1.03 lb/day   |
| December 2009 | 049F    | PCB Max Monthly Avg.                | 0.0002 tb/day | 0.25 ug/l     |
| December 2009 | 050A    | TSS Max Monthly Avg.                | 100 mg/l      | 111 mg/l      |
| January 2010  | 049B    | TSS Min Monthly % Removal           | 85%           | 82%           |
| January 2010  | 049F    | Total Mercury 12 Month              | 10 ng/l       | 13 ng/l       |
| ·             |         | Rolling Avg.                        |               |               |
| February 2010 | 049F    | Total Mercury 12 Month Rolling Avg. | 10 ng/l       | 13 ng/l       |
| March 2010    | 050A ·  | TSS Max Monthly Avg.                | 100 mg/l      | 112 mg/l      |
| March 2010    | 049F    | Total Mercury 12 Month Rolling Avg. | 10 ng/l       | 13 ng/l       |

On March 15 and 16, 2010, DNRE staff conducted a Reconnaissance Inspection at the Detroit WWTP. The purpose of this inspection was to evaluate the WWTP's Operations and Maintenance program with particular attention to the solids handling processes. A copy of the inspection report is enclosed. (Appendix 1)

Part II.D.3 of the NPDES permit requires the DWSD to properly operate and maintain all treatment or control facilities or systems installed or used by the DWSD to achieve compliance with the terms and conditions of the permit. Based the Department's review of facility conditions and operations and maintenance records during the March 15 & 16, 2010 inspection, the Department has determined that DWSD has failed to properly maintain the wastewater treatment facilities. Failure to properly maintain the wastewater treatment facilities is a violation of your NPDES permit.

At a January 10, 2010 meeting with DNRE staff was informed of a problem with a valve in the Complex A effluent chamber that leads to the PE-AS (primary effluent conduit to the aeration decks). DWSD has no record of preventive maintenance having been performed on this valve. DWSD suspects that the 70 year old valve is leaking recycle flow from the sludge thickeners into the PE-AS. The leaking valve appears to be a source of the excess solids that overloaded the secondary treatment units in the second half of 2009, contributing to the effluent limit violations listed above.

High solids inventories have prevented DWSD from being able to repair the valve. In the interim, a reduction of the primary sludge pumping rate has reduced the solids concentrations in the secondary influent to acceptable levels. As a result, effluent quality and TSS removal rates have improved. DWSD has not reported any secondary TSS violations for the month of March 2010. The Department is concerned that the DWSD's failure to reduce solids inventories so that the valve could be repaired before the spring wet weather season may result in additional effluent limit violations.

Part II C.14 of the NPDES Permit requires the DWSD to keep an up-to-date-copy of the Operations and Maintenance (O&M) manual for the Detroit WWTP at the facility and to provide a copy of the O&M manual to the Department upon request. On September 6, 2006, the Detroit Wastewater Partners submitted a set of two (2) compact disks containing the O&M manuals for the WWTP. At that time some of the manuals had not been accepted by the Detroit Water and Sewerage Department and were not to be considered complete. It was also our understanding that the O&M manuals would be completed within the next year or two. A final version of the O&M manuals for the Detroit WWTP was never submitted to the Department for review. Most of the sections of the O&M manual that were not complete in the September 6, 2006 version were unchanged in the version reviewed by DNRE staff during the March 2010 inspection. Failure to maintain an up-to-date O&M manual for the WWTP is a violation of your NPDES permit.

On December 2, 2009, the Southeast Michigan District Supervisor of the Water Bureau issued a letter reinstating the dewatering production requirements of Section II.A.1.b of the SACJ effective January 1, 2010. Section II.A.1.b of the SACJ requires the Detroit WWTP to dewater no less than 550 dry tons per day (DTD) of sludge as a quarterly average and to utilize that capability to properly manage sludge inventory as needed. The first quarterly average will include daily data from the January through March 2010 period. The Key Indicator Report submitted by the DWSD on March 9, 2010, indicates that the average biosolids production for January 2010 was 427 DTD and 434 DTD in February 2010. The Detroit WWTP has confirmed to Department staff that it will not achieve the quarterly average for January through March 2010. Failure to achieve the quarterly average sludge production target is a violation of the SACJ.

The SACJ required the DWSD to submit an approvable comprehensive plan for implementation of long-term measures that sustain the ability of DWSD to comply with all effluent limitations and conditions in NPDES Permit MI0022802. The plan was to identify actions taken or to be taken to address the findings of "Report of the Committee of Investigation: Detroit Water and Sewerage Department Violations, January 12, 2000" (The Report). The Comprehensive Plan for Long Term Measures to Ensure Compliance with Permit Requirements (The Plan) was submitted August 1, 2000.

Under the August 1, 2000 Plan, the DWSD committed to address the staffing shortfall at the WWTP. In the months immediately preceding the entry of the SACJ and for a few years following staffing levels at the WWTP improved. Since that time both the number of budgeted positions and the percentage of those positions that are filled have steadily decreased (Appendix 2). The DWSD has failed to meet the requirements of the Plan with regard to staffing.

Under the August 1, 2000 Plan, the DWSD committed to re-engineer its maintenance system and organization. The February 1, 2010 report indicates that the target date for reducing the backlog of work orders by 10% has been revised to the 4<sup>th</sup> quarter of 2010. The data collected during the March 2010 inspection indicates that the primary reason for DWSD's failure to achieve even a modest 10% reduction in work order backlog is the lack of staff to do the work. DNRE inspectors requested a summary of all closed Preventive Maintenance (PM) work orders from January 1, 2009 through March 15, 2010. The data provided indicates that 43% of the PM work orders were not completed. Of those, 83% were not completed due to lack of manpower. The DWSD has failed to meet the requirements of the Plan with regard to preventive maintenance.

Purchasing is another area that was targeted for improvement under the SACJ. The Plan states that procurement processes at the WWTP must quickly and effectively procure goods and services in order to consistently maintain compliance with the NPDES permit. The City of Detroit and DWSD committed to a process improvement initiative to address various aspects of the purchasing process. The February 1, 2010 SACJ report indicates that only 28% of the DWSD's 1920 purchase requisitions were processed into actual purchase orders in the 4<sup>th</sup> quarter of 2009. The report also indicates that there were 224 work orders that remained incomplete at the end of the 4<sup>th</sup> quarter of 2009 because parts needed to complete the work were not available for 21 or more days. The DWSD has failed to meet the requirements of the Plan with regard to purchasing.

Rule 299.2955 of the Michigan Administrative Code (MAC) requires sewerage systems to be operated and maintained at all times as efficiently as possible and in a manner which will minimize upsets and discharges of excessive pollutants. The rule also requires the owner of the sewerage system to provide an adequate operating staff which is qualified to carry out the operation and maintenance required to insure compliance with the conditions of subrule (1). Based on our review of facility conditions and operations and maintenance records during the March 15 & 16, 2010 inspection the department has determined that the Detroit WWTP does not have sufficient staff to properly operate and maintain the WWTP. The inspection identified the lack of adequate staffing as the principal reason preventive maintenance work was not completed as planned. The inspection also identified issues with purchasing and materials and parts shortages that extend the length of time that equipment remains out of service. Failure to provide adequate staff for the operation and maintenance of the sewerage system is a violation of Rule 299.2955 of the MAC.

DNRE believes that the lack of adequate preventive maintenance contributed significantly to the equipment failures that prevented the DWSD from keeping solids inventories at a manageable level which resulted in significant violations of NPDES permit effluent limitations. Failure to maintain the WWTP in a manner which would minimize upsets and discharges of excessive pollutants is a violation of Rule 299.2955 of the MAC.

DNRE has serious concerns about the DWSD's ability to consistently maintain long term compliance with NPDES permit limits and requirements given the present staffing levels and conditions at the WWTP.

The violations identified in the Violation Notice and the Second Violation Notice are violations of Parts 31 and 41of the NREPA, the Second Amended Consent Judgment and NPDES Permit No. MI0022802.

The Detroit Water and Sewerage Department shall take immediate action to achieve and maintain compliance with the terms and conditions of Parts 31 and 41 of the NREPA, the Second Amended Consent Judgment and NPDES Permit No. MI0022802.

Please submit a corrective action plan with associated schedules, as appropriate, to this office by June 1, 2010. At a minimum, the corrective action plan shall include:

1. A copy of the staffing plan that was developed under The Plan.

2. Short term actions that the DWSD will take to address critical staffing needs such as the use of skilled trades' contracts.

3. Actions that DWSD will take to ensure that all positions identified in the staffing plan as critical to ensuring long term compliance with the NPDES permit are filled, with allowance for a small but reasonable number of vacancies, and measures to ensure that critical vacancies are filled in a timely manner going forward. This should address hiring and training of operations, maintenance and support staff as well as succession planning to replace retiring supervisory staff.

4. Short term actions to address equipment issues which should include expediting the installation of rented dewatering units and use of the expedited purchasing processes developed under the SACJ to ensure that parts and materials needed to repair out of

service equipment are procured in the shortest time possible.

5. Longer term actions to address equipment reliability issues with the Complex I Belt Filter Presses. Central Offload Facility and sludge conveyance systems.

6. An update on the status of CS-1483 including the possibility of adding Complex I Belt Filter Press study and design to this contract.

7. Short term actions to increase solids disposal capability including a report on the progress made in securing additional landfill space.

8. A Long Term Solids Disposal Plan including necessary interim incinerator projects.

9. Actions that will be taken to ensure that parts and materials are in stock and available for routine maintenance and that parts and equipment needed to complete critical work orders are obtained as quickly as possible.

If you have any factual information you would like to share with us regarding the violations identified in this Notice please provide them with your written response.

Compliance with the terms of this Notice does not relieve Detroit Water and Sewerage Department of any liability, past or present from the failure to meet the conditions specified in the SACJ or failure to comply with the permit or Parts 31 and 41 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended.

The DNRE reserves its right to take all necessary and appropriate enforcement actions for all violations observed to date and any violations that occur in the future. This may include civil action seeking fines, enforcement costs and injunctive relief, and potential criminal prosecution.

Due to the severity of the noncompliance, the matter is being evaluated for escalated enforcement.

If you have any questions regarding this Notice or if you would like to arrange a meeting to discuss it, please contact Jodi Lynn Peace at 586-753-3783.

Sincerely,

Phil Argiroff, District Supervisor

Phil ayurt

Public Wastewater & Drinking Water Unit

Southeast Michigan District

Water Bureau

#### **Enclosures**

cc: Hon. John Felkens, U.S. District Court (with enclosures)

Dr. Jonathan Bulkley, Federal Court Monitor (with enclosures)

Mr. Stephen Kuplicki, DWSD (with enclosures)

Mr. Jared Richards, DWSD (with enclosures)

Mr. Mark Jacobs, Dykema Gossett

Ms. Pamela J. Stevenson, DAG

Mr. Pete Ostlund, WB

Mr. Barry Selden, WB

Compliance File

### **EXHIBIT 10**

Amended FY 2015 CIP BOWC Approved July 9, 2014

# FY 2015 Sewage Disposal System Capital Improvement Program

Fiscal Years 2015 Through 2019

Mike Duggan, Mayor City of Detroit

#### **Administration**

Sue F. McCormick, Director
Darryl A. Latimer, Deputy Director
William Wolfson, General Counsel/
Chief Administrative/Compliance Officer
Nicolette Bateson, Chief Financial Officer
Cheryl Porter, Chief Operating Officer
Syed Ali, P.E., Head Engineer
Capital Management Group

#### **Board of Water Commissioners**

James Fausone, Esq., Chairperson Bradley Kenoyer, Vice Chairperson Fred Barnes, P.E Mary E. Blackmon Linda D. Forte Conrad L. Mallett Jr. J. Bryan Williams

#### **Detroit City Council**

Brenda Jones, President
George Cushingberry Jr., President Pro Tem
Saunteel Jenkins.
James Tate
Scott Benson
Andre' L. Spivey
Mary Sheffield
Raquel Castaneda-Lopez
Gabe Leland

Janice M. Winfrey, City Clerk

## Sewage Disposal System Capital Improvement Program Fiscal Years 2014-15 Through 2018-19

Amended FY 2015 CIP BOWC Approved July 9, 2014

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| New Projects                                            |    |

Detroit Water and Sewerage Department
Capital Improvement Program
Fiscal Years 2014-15 through 2018-19

Amended FY 2015 CIP BOWC Approved July 9, 2014

#### **Executive Management Team**

Sue F. McCormick, Director
Darryl A. Latimer, Deputy Director
Nicolette Bateson, Chief Financial Officer
William Wolfson, General Counsel/Chief Administrative/Compliance Officer
Cheryl Porter, Chief Operating Officer
Dan Rainey, Information Technology Director
W. Barnett Jones, Chief Security Officer
Terri Conerway, Organizational Development Director

#### **Capital Management Group**

Syed Ali, P.E., Head Engineer Corey Thomas

## Sewage Disposal System Detroit Water and Sewerage Department Capital Improvement Programs

Amended FY 2015 CIP BOWC Approved July 9, 2014

#### **OVERVIEW**

The attached report summarizes the capital planning agenda for the DWSD Sewage Disposal System. This should be considered a planning document – the CIP is a dynamic and evolving plan that requires continual review and modification during the course of each year. The estimates indicated in the early years of the attached report are likely more precise than those in the later years. The project descriptions represent brief synopses of the entire project scope; these descriptions are generally more precise for ongoing active projects than for planned new projects, where specific project activities may have yet to be determined.

#### **DEFINITIONS**

#### **Funded Portion of the Programs**

The Water System and Sewerage System capital improvement programs cover a five fiscal year planning horizon. However, only the first year or two of the programs are actually funded. The Department uses the pay as you go method of capital project funding rather than financing projects 100% in advance. The Department's capital financing strategy is designed to align capital project financing sources with program requirements in a framework that balances multiple goals, including: (a) recover the costs of capital investment over the useful lives of the capital assets; (b) minimize the impact of the capital programs on water and sewage rates; and (c) protect and enhance the Department's financial position.

#### Projected Expenditures Spread by Fiscal Year

In the Water System and Sewerage System capital improvement programs, when project funding requirements are displayed spread by fiscal year, the dollar amount shown for the projects is the estimated expenditures for each fiscal year throughout the life of the projects. This type of presentation identifies what the financial requirements would be, using the pay as you go method of financing, which is the method currently in use by DWSD.

#### **Project Types**

The typical capital project consists of three distinct phases: study, design and construction. In some cases, phases are combined, such as study/design or design/construction. For capital program purposes, each phase is considered a separate project. Financing is committed only for the current project phase, and not for any subsequent phase until that phase has been authorized to start. Project identified as ongoing have been authorized to start by the director and the work is underway. Project identified as new have not yet started.

#### **Project Detail Sections**

Active Project: is a project that has an assigned DRMS number, been issued the Notice to Start Work, had expenditures in the last fiscal year and has projected expenditures of more than \$100,000 in the current fiscal year.

<u>Project On Hold</u>: is a project that may or may not have an assigned DRMS number, experienced expenditures or no expenditures in previous fiscal year(s), and/or has no projected expenditures in the current fiscal year or future fiscal years.

#### Sewage Disposal System **Detroit Water and Sewerage Department Capital Improvement Programs**

Amended FY 2015 CIP **BOWC Approved** July 9, 2014

Projects <u>Under Procurement</u>: is a project that has an assigned DRMS number and has not been issued Notice to Start Work.

Projects Pending Close-out: is a project that has an assigned DRMS number, been issued the Notice to Start Work, has projected expenditures for the current fiscal year equal to \$100,000 or less - with no further projected expenditures, and has been substantially completed.

New Project: is a project that does not have an assigned DRMS number, has a proposal, and has never had expenditures charged to it.

#### **Primary Project Purpose**

- 1 Directly mandated projects (Specific projects mandated by regulatory agencies or court ordered)
- 2 Projects mandated by regulatory requirements to maintain compliance
- 3 Projects required to maintain or improve system reliability and/or capacity
- 4 Projects that utilize technological advances to improve operational efficiency, worker productivity and/or managerial effectiveness
- 5 Projects required for new service

#### **Allocation Status**

D - Detroit Only

S - Suburban Only

M - Macomb Only

C/O - Clinton/Oakland Only

C/O & M - Clinton/Oakland and Macomb

83/17 – New Wet Weather Facility

CTA - Common To All

OMID - Oakland Macomb Interceptor District

#### **Project Types**

S - Study; S/D - Study and Design; S/D/C - Study, Design and

S/D/CA - Study, Design and Construction Assistance

D - Design; DB - Design Build; DBA - Design Build

Assistance:

D/C - Design and Construction; D/CA - Design and

Construction Assistance

C - Construction; CA - Construction Assistance;

CM – Construction Management

C/CA - Construction and Construction Assistance

IT – Information Technology Systems

LS - Legal Services

PO - Purchase Order

#### Legend

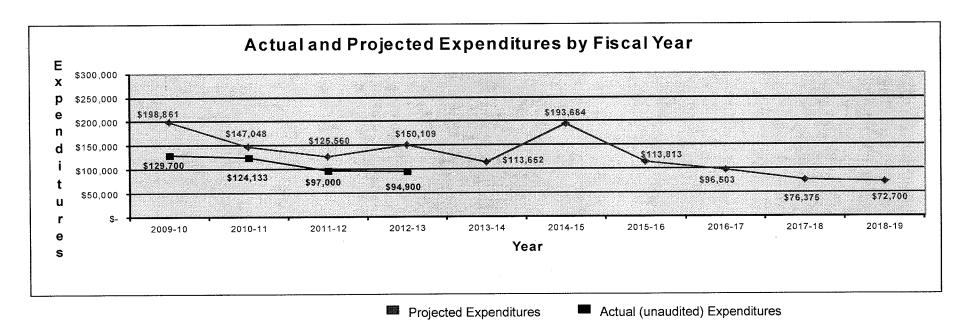
(1) Costs shown represent the Sewage Disposal System's portion of the project. Refer to the Water CIP for project costs financed by the Water Supply System.

## Sewage Disposal System Capital Improvement Program CIP Executive Summary

(000)

\* For information purposes only. Not counted in Total.

| Ongoing            | Update*   | 2014 15    | # of     | 2015 16    | 2016 17   | 2017 19   | 2019 10   | 5 Year<br>Sub Total | Remaining | Total      |
|--------------------|-----------|------------|----------|------------|-----------|-----------|-----------|---------------------|-----------|------------|
| Ongoing            | 2013-14   | 2014 - 15  | Projects | 2015 - 16  | 2016 - 17 | 2017 - 18 | 2018 - 19 | July Total          | Remaining | 10141      |
| Active             | 101,311   | 164,999    | 30       | 62,838     | 18,378    | 4,071     | 0         | 250,286             | 5,248     | 255,534    |
| Under Procurement  | 200       | 9,300      | 3        | 12,375     | 13,575    | 5,254     | 2,000     | 42,504              | 2,200     | 44,704     |
| Pending Close-out  | 8,041     | 185        | 12       | 0          | . 0       | 0         | 0         | 185                 | 0         | 185        |
| Ongoing Total      | 109,552   | 174,484    | 45       | 75,213     | 31,953    | 9,325     | 2,000     | 292,975             | 7,448     | 300,423    |
| New Projects Total | 4,100     | 19,200     | 5        | 38,600     | 64,550    | 67,050    | 70,700    | 260,100             | 49,001    | 309,101    |
| Total CIP          | \$113,652 | \$ 193,684 | 50       | \$ 113,813 | \$ 96,503 | \$ 76,375 | \$ 72,700 | \$ 553,075          | \$ 56,449 | \$ 609,524 |



Notations:

2009-10 thru 2012-13 totals are projected and actual (unaudited) expenditures 2013-14 thru 2018-19 are projected expenditures

# Summary of Projected Expenditures Spread by Fiscal Year

## Sewage Disposal System Capital Improvement Program

Amended FY 2015 CIP BOWC Approved July 9, 2014

#### Summary of Projected Expenditures Spread by Fiscal Year for Ongoing and New Projects

(000)

|                               | 2014 - 15         | 2015 - 16        | 2016 - 17        | 2017 - 18       | 2018 - 19       | Remaining       | Total              |
|-------------------------------|-------------------|------------------|------------------|-----------------|-----------------|-----------------|--------------------|
| Plant                         |                   |                  |                  |                 |                 |                 |                    |
| Primary Treatment             | 6,998             | 12,225           | 12,525           | 4,047           |                 |                 | 35,795             |
| Secondary Treatment           | 6,085             | 6,847            | 10,700           | 7,900           |                 | 1               | 31,533             |
| Solids Handling               | 112,398           | 51,580           | 13,628           | 1,968           |                 |                 | 179,574            |
| Disinfection                  | 3,201             | 1,589            | 4,950            | 10,200          | 29,000          | 51,448          | 100,388            |
| General Purpose               | 29,843            | 15,973           | 18,100           | 21,760          | 17,200          |                 | 102,876            |
|                               | \$158,525         | \$88,214         | \$59,903         | \$45,875        | \$46,200        | \$51,449        | \$450,166          |
| Facilities                    |                   |                  |                  |                 |                 |                 |                    |
| Sewer Interceptor System      | 5,005             | 5,000            | 5,000            | 5,000           | 5,000           |                 | 25,005             |
| Combined Sewer System         | 7,459             | 6,000            | 5,100            |                 |                 |                 | 18,559             |
| Lateral Sewer Replacement     | 4,972             |                  |                  |                 |                 |                 | 4,972              |
| Urban System Improvements     | 9,800             | 11,000           | 25,000           | 24,000          | 20,000          |                 | 89,800             |
| Information Technology        | 7,923             | 3,599            | 1,500            | 1,500           | 1,500           | 5,000           | 21,022             |
|                               | \$35,159          | \$25,599         | \$36,600         | \$30,500        | \$26,500        | \$5,000         | \$159,358          |
| <u></u>                       |                   |                  |                  |                 |                 |                 |                    |
| Ongoing Projects New Projects | 174,484<br>19,200 | 75,213<br>38,600 | 31,953<br>64,550 | 9,325<br>67,050 | 2,000<br>70,700 | 7,448<br>49,001 | 300,423<br>309,101 |
| TOTAL CAPITAL COSTS           | \$193,684         | \$113,813        | \$96,503         | \$76,375        | \$72,700        | \$56,449        | \$609,524          |
|                               |                   |                  |                  |                 |                 |                 |                    |

# Projected Expenditures Spread by Fiscal Year

## Sewage Disposal System Capital Improvement Program Projected Expenditures Spread by Fiscal Year (000)

|                          | 2014 - 15 | 2015 - 16 | 2016 - 17 | 2017 - 18 | 2018 - 19 | Remaining       | Total     |
|--------------------------|-----------|-----------|-----------|-----------|-----------|-----------------|-----------|
| Plant                    |           |           |           |           |           |                 |           |
| Primary Treatment        |           |           |           |           |           |                 |           |
| Ongoing                  | 6,998     | 8,375     | 7,025     | 2,397     |           |                 | 24,795    |
| New                      |           | 3,850     | 5,500     | 1,650     |           |                 | 11,000    |
|                          | \$6,998   | \$12,225  | \$12,525  | \$4,047   |           |                 | \$35,795  |
| Secondary Treatment      |           |           |           |           |           |                 |           |
| Ongoing                  | 6,085     | 1,347     | 200       | 200       | 4         |                 | 7,832     |
| New                      |           | 5,500     | 10,500    | 7,700     |           | 1               | 23,701    |
|                          | \$6,085   | \$6,847   | \$10,700  | \$7,900   |           | \$1             | \$31,533  |
| Solids Handling          |           |           |           |           |           |                 |           |
| Ongoing                  | 112,198   | 49,680    | 10,728    | 968       |           |                 | 173,574   |
| New                      | 200       | 1,900     | 2,900     | 1,000     |           |                 | 6,000     |
|                          | \$112,398 | \$51,580  | \$13,628  | \$1,968   |           |                 | \$179,574 |
| Disinfection             |           |           |           |           |           |                 |           |
| Ongoing                  | 3,201     | 1,039     | 2,200     | 1,100     | 2,000     | 7,448           | 16,988    |
| New                      |           | 550       | 2,750     | 9,100     | 27,000    | 44,000          | 83,400    |
|                          | \$3,201   | \$1,589   | \$4,950   | \$10,200  | \$29,000  | \$51,448        | \$100,388 |
| General Purpose          |           |           |           |           |           |                 |           |
| Ongoing                  | 19,843    | 2,673     | 1,800     | 660       |           |                 | 24,976    |
| New                      | 10,000    | 13,300    | 16,300    | 21,100    | 17,200    |                 | 77,900    |
|                          | \$29,843  | \$15,973  | \$18,100  | \$21,760  | \$17,200  |                 | \$102,876 |
| <u>Plant Total</u>       |           |           |           |           |           |                 |           |
| Ongoing Projects         | 148,325   | 63,114    | 21,953    | 5,325     | 2,000     | 7,448           | 248,165   |
| New Projects             | 10,200    | 25,100    | 37,950    | 40,550    | 44,200    | 44,001          | 202,001   |
|                          | \$158,525 | \$88,214  | \$59,903  | \$45,875  | \$46,200  | <u>\$51,449</u> | \$450,166 |
| Facilities               |           |           |           |           |           |                 |           |
| Sewer Interceptor System |           |           |           |           |           |                 | •         |
| Ongoing                  | 5         |           |           |           |           |                 | 5         |
| New                      | 5,000     | 5,000     | 5,000     | 5,000     | 5,000     |                 | 25,000    |
|                          | \$5,005   | \$5,000   | \$5,000   | \$5,000   | \$5,000   |                 | \$25,005  |

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## Sewage Disposal System Capital Improvement Program Projected Expenditures Spread by Fiscal Year (000)

| •                         | 2014 - 15 | 2015 - 16 | 2016 - 17 | 2017 - 18 | 2018 - 19 | Remaining | Total            |
|---------------------------|-----------|-----------|-----------|-----------|-----------|-----------|------------------|
| Combined Sewer System     |           |           |           |           |           |           |                  |
| Ongoing                   | 7,459     |           |           |           |           |           | 7,459            |
| New                       |           | 6,000     | 5,100     |           |           |           | 11,100           |
|                           | \$7,459   | \$6,000   | \$5,100   |           |           |           | \$18,559         |
| Lateral Sewer Replacement |           |           |           |           |           |           |                  |
| Ongoing                   | 4,972     |           |           |           |           |           | 4,972            |
|                           | \$4,972   |           |           |           |           |           | \$4,972          |
| Urban System Improvements |           |           |           |           |           |           |                  |
| Ongoing                   | 8,800     | 10,000    | 10,000    | 4,000     |           |           | 32,800           |
| New                       | 1,000     | 1,000     | 15,000    | 20,000    | 20,000    |           | 57,000           |
|                           | \$9,800   | \$11,000  | \$25,000  | \$24,000  | \$20,000  |           | \$89,800         |
| Information Technology    |           |           |           |           |           |           |                  |
| Ongoing                   | 4,923     | 2,099     |           |           |           |           | 7,022            |
| New                       | 3,000     | 1,500     | 1,500     | 1,500     | 1,500     | 5,000     | 14,000           |
|                           | \$7,923   | \$3,599   | \$1,500   | \$1,500   | \$1,500   | \$5,000   | \$21,022         |
| <u>Facilities Total</u>   |           |           |           |           |           |           |                  |
| Ongoing Projects          | 26,159    | 12,099    | 10,000    | 4,000     | •         |           | 52,258           |
| New Projects              | 9,000     | 13,500    | 26,600    | 26,500    | 26,500    | 5,000     | 107,100          |
| •                         | \$35,159  | \$25,599  | \$36,600  | \$30,500  | \$26,500  | \$5,000   | <u>\$159,358</u> |
| Summary - Total Costs     |           |           |           |           |           |           |                  |
| Ongoing Projects          | 174,484   | 75,213    | 31,953    | 9,325     | 2,000     | 7,448     | 300,423          |
| New Projects              | 19,200    | 38,600    | 64,550    | 67,050    | 70,700    | 49,001    | 309,101          |
| TOTAL CAPITAL COSTS       | \$193,684 | \$113,813 | \$96,503  | \$76,375  | \$72,700  | \$56,449  | \$609,524        |

# Summary of Mandate and Allocation Status by Fiscal Year

#### Sewage Disposal System

#### **Capital Improvement Program**

#### **Summary of Primary Project Purpose & Allocation Status**

### Projected Expenditures Spread by Fiscal Year

(000)

Amended FY 2015 CIP BOWC Approved July 9, 2014

| SUMMARY BY PRIMARY PROJECT PURPOSE AND ALLOCATION                                                                                         | 2014 - 15 | 2015 - 16 | Funded    | 2016 - 17 | 2017 - 18 | 2018 - 19 | Remaining | Total     |
|-------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Directly Mandated Projects                                                                                                                |           |           |           |           |           |           |           |           |
| New Wet Weather Facility                                                                                                                  | . 15      | 0         | 15        | 0         | 0         | 0         | 0         | 15        |
| Common to All                                                                                                                             | 3,201     | 1,039     | 4,240     | 2,200     | 9,100     | 29,000    | 51,448    | 95,988    |
| Projects Mandated by Regulatory Requirements to Maintain Compliance                                                                       |           |           |           |           |           |           |           |           |
| Detroit Only                                                                                                                              | 159       | 0         | 159       | 0         | 0         | 0         | 0         | 159       |
| New Wet Weather Facility                                                                                                                  | 7,285     | . 0       | 7,285     | 0         | 0         | 0         | 0         | 7,285     |
| Common to All                                                                                                                             | 136,267   | 74,002    | 210,269   | 44,903    | 20,115    | 1,800     | 1         | 277,088   |
| Projects Required to Maintain or Improve System Reliability and/or Capacity                                                               |           |           |           |           |           |           |           |           |
| Detroit Only                                                                                                                              | 15,661    | 11,000    | 26,661    | 25,000    | 24,000    | 20,000    | 0         | 95,661    |
| Common to All                                                                                                                             | 25,361    | 25,539    | 50,900    | 22,900    | 21,660    | 20,400    | 0         | 115,860   |
| Projects that Utilize Technological Advances to<br>Improve Operational Efficiency, Worker<br>Productivity and/or Management Effectiveness |           |           |           |           |           |           |           |           |
| Common to All                                                                                                                             | 5,735     | 2,233     | 7,968     | 1,500     | 1,500     | 1,500     | 5,000     | 17,468    |
| TOTAL                                                                                                                                     | \$193,684 | \$113,813 | \$307,497 | \$96,503  | \$76,375  | \$72,700  | \$56,449  | \$609,524 |

### Sewage Disposal System Capital Improvement Program

#### Summary of Primary Project Purpose & Allocation Status Projected Expenditures Spread by Fiscal Year

(000)

| SUMMARY BY ALLOCATION STATUS | 2014 - 15 | 2015 - 16 | Funded    | 2016 - 17 | 2017 - 18 | 2018 - 19 | Remaining | Total     |
|------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Detroit Only                 | 15,820    | 11,000    | 26,820    | 25,000    | 24,000    | 20,000    | 0         | 95,820    |
| New Wet Weather Facility     | 7,300     | 0         | 7,300     | 0         | 0         | 0         | 0         | 7,300     |
| Common to All                | 170,564   | 102,813   | 273,377   | 71,503    | 52,375    | 52,700    | 56,449    | 506,404   |
| TOTAL                        | \$193,684 | \$113,813 | \$307,497 | \$96,503  | \$76,375  | \$72,700  | \$56,449  | \$609,524 |
| Detroit Only                 | 8%        | 10%       | 9%        | 26%       | 31%       | 28%       | 0%        | 16%       |
| New Wet Weather Facility     | 4%        | 0%        | 2%        | 0%        | 0%        | 0%        | 0%        | 1%        |
| Common to All                | 88%       | 90%       | 89%       | 74%       | 69%       | 72%       | 100%      | 83%       |

## Sewage Disposal System Capital Improvement Program Summary of Primary Project Purpose & Allocation Status Projected Expenditures Spread by Fiscal Year

Amended FY 2015 CIP BOWC Approved July 9, 2014

(000)

| SUMMARY BY PRIMARY PROJECT PURPOSE                                                                                                        | 2014 - 15 | 2015 - 16 | Funded  | 2016 - 17 | 2017 - 18 | 2018 - 19 | Remaining | Total     |
|-------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------|---------|-----------|-----------|-----------|-----------|-----------|
| Directly Mandated Projects                                                                                                                | 3,216     | 1,039     | 4,255   | 2,200     | 9,100     | 29,000    | 51,448    | 96,003    |
| Projects Mandated by Regulatory Requirements to Maintain Compliance                                                                       | 143,711   | 74,002    | 217,713 | 44,903    | 20,115    | 1,800     | 1         | 284,532   |
| Projects Required to Maintain or Improve System Reliability and/or Capacity                                                               | 41,022    | 36,539    | 77,561  | 47,900    | 45,660    | 40,400    | 0         | 211,521   |
| Projects that Utilize Technological Advances to<br>Improve Operational Efficiency, Worker<br>Productivity and/or Management Effectiveness | 5,735     | 2,233     | 7,968   | 1,500     | 1,500     | 1,500     | 5,000     | 17,468    |
| TOTAL                                                                                                                                     | \$193,684 | \$113,813 | 307,497 | \$96,503  | \$76,375  | \$72,700  | \$56,449  | \$609,524 |
| RELATIVE PERCENTAGE                                                                                                                       |           |           |         |           |           |           |           |           |
| Directly Mandated Projects                                                                                                                | 2%        | <1%       | 1%      | 2%        | 12%       | 40%       | 91%       | 16%       |
| Projects Mandated by Regulatory Requirements to Maintain Compliance                                                                       | 74%       | 65%       | 71%     | 47%       | 26%       | 2%        | . <1%     | 47%       |
| Projects Required to Maintain or Improve System Reliability and/or Capacity                                                               | 21%       | 32%       | 25%     | 50%       | 60%       | 56%       | 0%        | 35%       |
| Projects that Utilize Technological Advances to<br>Improve Operational Efficiency, Worker<br>Productivity and/or Management Effectiveness | 3%        | 2%        | 3%      | 2%        | 2%        | 2%        | 9%        | 3%        |

### A - Active Projects

An Active Project is a project that has:

- 1. an assigned DRMS number
- 2. been issued the Notice to Start Work
- 3. had expenditures in the last fiscal year
- 4. expenditures of more than \$100,000 in the current fiscal year

Primary

#### Sewage Disposal System

#### **Capital Improvement Program**

#### Projected Expenditures Spread by Fiscal Year Active Projects

(000)

\* For information purposes only. Not counted in Total.

|     | Project Title                                                                                                                                                                                                                                                                                     | DRMS<br>No.                                                                        | CIP No.                                                                        | Contract No.                                                                                                                  | Туре                     | Update* 2013-14 | 2014 - 15 | 2015 - 16 | 2016 - 17 | 2017 - 18 | 2018 - 19 | Remaining | Total  | Project<br>Purpose | Allocation<br>Status |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|--------|--------------------|----------------------|
| P   | rimary Treatment                                                                                                                                                                                                                                                                                  |                                                                                    |                                                                                |                                                                                                                               |                          |                 |           |           |           |           |           |           |        |                    |                      |
| . 1 | Rehabilitation of Primary<br>Clarifiers, Drain Lines, Hot<br>Water, and Scum Lines                                                                                                                                                                                                                | 004290                                                                             | 1141                                                                           | CS-1484                                                                                                                       | S/D/CA                   | A 51            | 50        | 100       | 50        | 22        |           |           | 222    | 2                  | СТА                  |
|     | This project includes rehabilitation hot water pipes on scum lines and 12, replacement of sludge convey collectors for clarifiers #5 through from rectangular clarifiers Nos. 3-include concrete crack repair on the etc., installation of large manhole and discharge to clarifier and interest. | d conveyor<br>yance equip<br>8, and reh<br>12. The s<br>floor, wall,<br>with sum p | rs for clar<br>pment, a<br>nabilitation<br>cope of v<br>and ceilir<br>pumps to | ifiers # 1 thround sludge cros<br>nd sludge cros<br>n of 12 drain li<br>vork shall also<br>ng and clarifier<br>collect draina | igh<br>ss<br>ines<br>rs, |                 |           |           |           |           |           |           |        |                    |                      |
| 2   | Pump Staion 1 Rack & Grit and MPI Sampling Station 1 Improvements                                                                                                                                                                                                                                 | 004420                                                                             | 1189                                                                           | PC-789                                                                                                                        | С                        | 748             | 6,900     | 6,900     | 5,600     | 2,221     |           |           | 21,621 | 2                  | СТА                  |
|     | The scope of work includes modi<br>existing grit and screening handli<br>MPI Sampling Station 1.                                                                                                                                                                                                  |                                                                                    |                                                                                |                                                                                                                               |                          |                 |           |           |           |           |           |           |        |                    |                      |
| S   | econdary Treatment                                                                                                                                                                                                                                                                                |                                                                                    |                                                                                |                                                                                                                               |                          |                 |           |           |           |           |           |           |        |                    |                      |
| 3   | Secondary Clarifiers, RAS<br>Pumps and MCCs<br>Improvements                                                                                                                                                                                                                                       | 004211                                                                             | 1100                                                                           | PC-776                                                                                                                        | С                        | 6,291           | 5,885     | 5 1,247   |           |           |           |           | 7,132  | 2                  | СТА                  |
|     | <del>-</del> 1:                                                                                                                                                                                                                                                                                   |                                                                                    |                                                                                | - tha aaaaada                                                                                                                 |                          |                 |           |           |           |           |           |           |        |                    |                      |

This project provides new power supply cable to/from the secondary clarifiers and substation MCCs, provide new MCCs at each secondary clarifier, provide short-circuit analysis and fault rating, provide 25 RAS pumps at the secondary clarifiers and complete all miscellaneous electrical work such as replacement of cables, conduit, pull boxes, panels and junction boxes, etc.

Primary

#### **Sewage Disposal System**

#### **Capital Improvement Program**

#### Projected Expenditures Spread by Fiscal Year Active Projects

(000)

\* For information purposes only. Not counted in Total.

|   | Project Title                                                                                                                                                                            | DRMS<br>No.                                | CIP No.                                | Contract No.                                    | Type      | Update* 2013-14 | 2014 - 15 | 2015 - 16 | 2016 - 17 | 2017 - 18 | 2018 - 19 | Remaining | Total | Prinary<br>Project<br>Purpose | Allocation<br>Status |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------|-------------------------------------------------|-----------|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|-------|-------------------------------|----------------------|
| 4 | Aeration System<br>Improvements                                                                                                                                                          | 004336                                     | 1194                                   | CS-1498                                         | S/D/CA    | 890             | 200       | 100       | 200       | 200       |           |           | 700   | 2                             | CTA                  |
|   | The scope of work includes study for the oxygen baffle on Bay 10 o influent, RAS piping, isolation gat replace RAS & influent magmeter also include replacement of influedeck no. 1 & 2. | f A1 & A2 o<br>e and valve<br>rs for ILP n | decks, rep<br>es for dec<br>os. 3,4, 8 | placement of<br>cks nos. 3 & 4<br>. 7. The work | ,<br>will |                 |           |           |           |           |           |           |       |                               |                      |
| S | olids Handling                                                                                                                                                                           |                                            |                                        |                                                 |           |                 |           |           |           |           |           |           |       |                               |                      |
| 5 | Complex I and Complex II Incinerator Improvements                                                                                                                                        | 004169                                     | 965                                    | PC-774                                          | DB        | 7,309           | 7,594     |           |           |           |           |           | 7,594 | 2                             | СТА                  |
|   | This project provides for the design<br>monitors, improvements for Yello<br>of refractory, brick work and inter-<br>incinerators at the Waste Water T                                    | w plume re<br>nal compo                    | eduction a<br>nents of c               | nd rehabilitati                                 | on        |                 |           |           |           |           |           |           |       |                               |                      |
| 6 | Rehabilitate Sludge Pump Stations 1 and 2                                                                                                                                                | 004225                                     | 607                                    | PC-780                                          | С         | 952             | 374       |           |           |           |           |           | 374   | 2                             | CTA                  |
|   | This project will provide for general Station Nos. 1 and 2, including structure studge loads, heating and miscellaneous building and utility                                             | ludge pum <sub>l</sub><br>ventilation      | improve<br>improven                    | ments to mee                                    | et .      |                 |           |           |           |           |           |           |       |                               |                      |
| ī | Replacement of Upper Level Belt Filter Presses for Complex I & II Dewatering                                                                                                             | 004284                                     | 1144                                   | CS-1483                                         | S/D/C/    | A 136           | 225       | 200       | 31        |           |           |           | 456   | 2                             | CTA                  |

The work will consist of replacement of 10 Belt Filter Presses for Complex I and 12 Upper Level Belt Filter Presses for Complex II Dewatering, SFE booster pumps, sludge belt conveyors, sludge grinders, and all related supportive equipment including control panels and associated wiring.

Primary

#### Sewage Disposal System

#### **Capital Improvement Program**

### Projected Expenditures Spread by Fiscal Year Active Projects

(000)

\* For information purposes only. Not counted in Total.

|     | Project Title                                                                                                                                                                                                 | DRMS<br>No.                                             | CIP No.                                              | Contract No.                                                     | Туре | Update* 2013-14 | 2014 - 15 | 2015 - 16 | 2016 - 17 | 2017 - 18 | 2018 - 19 | Remaining | Total   | Project<br>Purpose | Allocation<br>Status |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|------------------------------------------------------|------------------------------------------------------------------|------|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|---------|--------------------|----------------------|
| 8   | Replacement of Belt Filter<br>Presses for Complex I and<br>Upper Level Complex II                                                                                                                             | 004397                                                  | 1144                                                 | PC-787                                                           | С    | 6,918           | 7,000     | 4,480     | 1,331     |           |           |           | 12,811  | 2                  | СТА                  |
| . • | The work will consist of replaceme Complex I and 12 Upper Level Be Dewatering, SFE booster pumps, grinders, and all related supportive and associated wiring.                                                 | lt Filter Pro<br>sludge bei                             | esses for<br>It conveyo                              | Complex II<br>ors, sludge                                        | els  |                 |           |           |           |           |           |           |         |                    |                      |
| 9   | Sewage Sludge Incinerator Air<br>Quality Improvements at<br>WWTP                                                                                                                                              | 004426                                                  | 1253                                                 | PC-791                                                           | DB   | 3,776           | 13,000    | 12,000    | 7,000     | 968       |           |           | 32,968  | 2                  | СТА                  |
|     | This project involves the design a air quality improvements at Comp Facility at WWTP. The scope of a scrubber, ID fan, noise reduction a installation of conveyance system necessary, and air quality control | lex I and C<br>work includ<br>modification<br>from Corr | Complex I<br>des install<br>on, burner<br>aplex I to | I Incinerator<br>lation of new<br>train upgrade<br>Complex II as | ,    |                 |           |           |           |           |           |           |         |                    |                      |
| 10  | Biosolids Dryer Facility at WWTP                                                                                                                                                                              | 004439                                                  | 1254                                                 | PC-792                                                           | DB   | 26,495          | 84,000    | 33,000    | 2,366     |           |           |           | 119,366 | 2                  | CTA                  |

This project provides for study, design and construction of a thermal dryer facility to treat 250 dtpd. The scope of work also includes a conveyance system from Complex I to Complex II and installation of quality control equipment.

Primary

#### **Sewage Disposal System**

#### **Capital Improvement Program**

#### Projected Expenditures Spread by Fiscal Year Active Projects

(000)

\* For information purposes only. Not counted in Total.

|    | Project Title                                                                                                                                         | DRMS<br>No.            | CIP No.    | Contract No.   | Туре   | Update* 2013-14 | 2014 - 15 | 2015 - 16 | 2016 - 17 | 2017 - 18 | 2018 - 19 | Remaining | Total | Project<br>Purpose | Allocation<br>Status |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------|----------------|--------|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|-------|--------------------|----------------------|
| Di | sinfection                                                                                                                                            |                        |            |                |        |                 |           |           |           |           |           |           |       |                    |                      |
| 11 | Study, Design, & Construction<br>Management Services for<br>Modified Detroit River Outfall<br>No. 2 - WWTP                                            | 004178                 | 1117       | CS-1448        | S/D/CA | 97              | 131       | 5         |           |           |           | 5,248     | 5,384 | 1                  | СТА                  |
|    | This project will involved limited st<br>construction plans, and construction<br>to implement the modified Detroit<br>with NPDES Permit requirements. | on manag<br>River Outi | ement se   | rvices necess  | ary    |                 |           |           |           |           |           |           |       |                    |                      |
|    | This contract is being used to pro-<br>assistance services for RRO-2 Se                                                                               |                        | , design a | and constructi | on     |                 |           |           |           |           |           |           |       |                    |                      |
| 12 | Rouge River Outfall No. 2<br>(RRO-2) Segment 1 - WWTP                                                                                                 | 004395                 | 1235       | PC-786         | С      | 3,399           | 2,570     | 34        |           |           |           |           | 2,604 | 1                  | CTA                  |

The scope of work includes installation of new SL-8 Gates, modification of Movable DAM MD-1, and installation of new power pack building. This project will also provide for a hydraulic actuation system for gates MD-3 A/B, MD-4 A/B and SG 41-44, modification of stop logs SL-1 A/B, and replace Chlorination/dechlorination tank car emergency shutoff valves. The project will further include modification of PLC based control system with an Ovation based or Rockwell control system, capping abandon PC-709 entrance shaft, and removal of PC-709 precast tunnel lining segments.

Modifications

#### **Sewage Disposal System**

#### **Capital Improvement Program**

#### Projected Expenditures Spread by Fiscal Year Active Projects

(000)

\* For information purposes only. Not counted in Total.

|    | Project Title                                                                                                                                                                                                                                                                                                    | DRMS<br>No.                                                                    | CIP No.                                                                                                                                                                                                                                                                                                                       | Contract No.                                                                                           | Туре                  | Update* 2013-14 | 2014 - 15 | 2015 - 16 | 2016 - 17 | 2017 - 18 | 2018 - 19 | Remaining | Total . | Primary<br>Project<br>Purpose | Allocation<br>Status |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|---------|-------------------------------|----------------------|
| G  | eneral Purpose                                                                                                                                                                                                                                                                                                   |                                                                                |                                                                                                                                                                                                                                                                                                                               |                                                                                                        |                       |                 |           |           |           |           |           |           |         |                               |                      |
| 13 | As-needed Engineering<br>Services (1)                                                                                                                                                                                                                                                                            | 003451                                                                         | 54                                                                                                                                                                                                                                                                                                                            | CS-1345                                                                                                | D                     | 229             | 168       |           |           |           |           |           | 168     | 3                             | CTA                  |
|    | This project provides rapid design scale projects which have not bee engineering staff.                                                                                                                                                                                                                          | turn-aroui<br>n initiated                                                      | nd for a v<br>due to la                                                                                                                                                                                                                                                                                                       | ariety of small<br>ck of in-house                                                                      | 1                     |                 |           |           |           |           |           |           |         |                               |                      |
| 14 | Plant-wide Fire Alarm Systems<br>Upgrade/ Integration and Fire<br>Protection Improvements                                                                                                                                                                                                                        | 004180                                                                         | 1028                                                                                                                                                                                                                                                                                                                          | CS-1443                                                                                                | S/D/CA                | 40              | 112       |           |           |           |           |           | 112     | 3                             | CTA                  |
|    | This project involves the necessar assistance for the installation of as System in the approximately 100 is standalone fire alarm system) at the centralized monitoring and assure system will be interfaced with the that signals associated with this sexisting fiber optic cables as a phystandalone systems. | n Integrate<br>buildings (<br>he WWTP<br>faster cor<br>existing W<br>ystem can | ed Plant Volet which of which order or | Vide Fire Alarr<br>50 + have a<br>to facilitate<br>ction. The new<br>ntrol System s<br>mitted over the | m<br>v<br>so<br>e     |                 |           |           |           |           |           |           |         |                               |                      |
| 15 | Plant-wide Fire Alarm Systems<br>Upgrade/ Integration and Fire<br>Protection Improvements                                                                                                                                                                                                                        | 004180                                                                         | 1028                                                                                                                                                                                                                                                                                                                          | PC-782                                                                                                 | С                     | 3,455           | 2,869     | )         |           |           |           |           | 2,869   | 3                             | CTA                  |
|    | This project involves the installation Alarm System in the approximate stand-alone fire alarm system) at centralized monitoring and assure system will be interfaced with the that signals associated with this sexisting fiber optic cables as a physical signal.                                               | ly 100 buil<br>the WWTI<br>faster col<br>existing W<br>ystem can               | dings (of<br>P in order<br>rrective a<br>WWTP Co<br>n be trans                                                                                                                                                                                                                                                                | which 50 + ha<br>to facilitate<br>ction. The nev<br>ntrol System s<br>mitted over th                   | ave a<br>v<br>so<br>e |                 | ige.      |           |           |           |           |           |         |                               |                      |

standalone systems.

#### Sewage Disposal System

#### **Capital Improvement Program**

#### Projected Expenditures Spread by Fiscal Year Active Projects

(000)

\* For information purposes only. Not counted in Total.

|    |                                                                                                                                                                                                                                                                                                                                            |                                                                                                         |                                                                                             |                                                                                                                   |                                 | ,                  | (000)     |           |           |           |           |           |        | n :                           |                      |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|---------------------------------|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|--------|-------------------------------|----------------------|
|    | Project Title                                                                                                                                                                                                                                                                                                                              | DRMS<br>No.                                                                                             | CIP No.                                                                                     | Contract No.                                                                                                      | Туре                            | Update*<br>2013-14 | 2014 - 15 | 2015 - 16 | 2016 - 17 | 2017 - 18 | 2018 - 19 | Remaining | Total  | Primary<br>Project<br>Purpose | Allocation<br>Status |
| 16 | Underground Electrical Duct<br>Bank Repair and EB-1, EB-2,<br>and EB-10 Primary Power<br>Service Improvements - WWTP                                                                                                                                                                                                                       | 004181                                                                                                  | 366                                                                                         | PC-783                                                                                                            | С                               | 10,806             | 10,707    |           |           |           |           |           | 10,707 | 2                             | СТА                  |
|    | This project will include replaceme<br>B, unit substation EB-1, EB-2, and<br>switchgear DE-1, and two outdoor<br>repair of building structure and as<br>also include site preparation, insta<br>new electrical cable, coordination<br>coordination of system reconnection                                                                  | EB-10, uit 3-phase processed to the sociated control of the system of system.                           | nit 5kv su<br>orimary tr<br>omponen<br>new ducts<br>shut-dow                                | bstation and<br>ansformers; a<br>ts. The work<br>a, placement o<br>un, and                                        | and<br>will                     |                    |           |           |           |           |           |           | ,      |                               |                      |
| 17 | General Engineering Services (1)                                                                                                                                                                                                                                                                                                           | 004207                                                                                                  | 1031                                                                                        | CS-1432A                                                                                                          | D                               | 782                | 511       | 222       |           |           |           |           | 733    | 3                             | CTA                  |
|    | This project involves the study, de services for a variety of disciplines architectural, structural, geotechnic electrical, and instrumentation in a basis. Further tasks involve one on the limited to water treatment planincluding booster stations, wastew collection systems including pump overflow facilities, and administrations. | s including<br>ical, hydra<br>n variety of<br>or more DV<br>its, water o<br>vater treati<br>ing station | , but not i<br>ulics, med<br>tasks on<br>WSD facio<br>distributio<br>ment plar<br>ns, combi | limited to, civi<br>chanical, pipin<br>an as-neede<br>lities including<br>n system<br>nt, wastewate<br>ined sewer | il,<br>ng,<br>ed<br>g, but<br>r |                    |           |           |           |           |           |           |        |                               |                      |
| 18 | As-needed CIP Implementation<br>Assistance and Related<br>Services (1)                                                                                                                                                                                                                                                                     | 004218                                                                                                  | 956                                                                                         | CS-1433                                                                                                           | S/D/C                           | M 849              | 1,300     | 851       | 700       | 50        |           |           | 2,901  | 3                             | CTA                  |
|    | This project provides for multi-disc<br>"as-needed basis" to support DW                                                                                                                                                                                                                                                                    | cipline Eng<br>SD's Wate                                                                                | gineering<br>er & Sewe                                                                      | services on a<br>er Systems.                                                                                      | n                               |                    |           |           |           |           |           |           |        |                               |                      |
| 19 | General Engineering Services (1)                                                                                                                                                                                                                                                                                                           | 004293                                                                                                  | 1182                                                                                        | CS-1481                                                                                                           | D                               | 972                | 1,000     | 1,000     | 500       | 323       |           |           | 2,823  | 3                             | CTA                  |
|    | This project provides for rapid des<br>scale projects on an as needed be<br>professional services.                                                                                                                                                                                                                                         | sign turn-a<br>asis provid                                                                              | round for<br>ling multi                                                                     | a variety of s<br>disciplinary                                                                                    | small                           |                    |           |           |           |           |           |           |        |                               |                      |

Primary

#### **Sewage Disposal System**

#### Capital Improvement Program

#### Projected Expenditures Spread by Fiscal Year Active Projects

(000)

\* For information purposes only. Not counted in Total.

|    | Project Title                                                                                                                                                                             | DRMS<br>No.                               | CIP No.                               | Contract No.                                  | Туре   | Update*<br>2013-14 | 2014 - 15 | 2015 - 16 | 2016 - 17 | 2017 - 18 | 2018 - 19 | Remaining | Total | Project<br>Purpose | Allocation<br>Status |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|---------------------------------------|-----------------------------------------------|--------|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-------|--------------------|----------------------|
| 20 | As-needed Engineering<br>Services for Concrete Testing,<br>Geotechnical Soil Borings,<br>other Testing Services, and<br>Related Services (1)                                              | 004295                                    | 1147                                  | CS-1488                                       | D/C    | 196                | 600       | 600       | 600       | 287       |           | •         | 2,087 | 3                  | СТА                  |
|    | The scope of work provides for as concrete testing, geotechnical soil related services.                                                                                                   |                                           |                                       |                                               |        |                    |           |           |           |           |           |           |       |                    |                      |
| 21 | Geotechnical and Related<br>Services on an As-Needed<br>Basis (1)                                                                                                                         | 004307                                    | 1164                                  | CS-1490                                       | D      | 109                | 401       |           |           |           |           |           | 401   | 3                  | СТА                  |
|    | The work includes consultant serv<br>needed basis. The work also pro<br>technical services as requested b                                                                                 | vides for a                               |                                       |                                               |        |                    |           |           |           |           |           |           |       |                    |                      |
| 22 | Department-wide General<br>Engineering Services on an<br>As-needed Basis (1)                                                                                                              | 004338                                    | 1026                                  | CS-1499                                       | D      | 741                | 889       | l         |           |           |           |           | 889   | 3                  | D                    |
|    | This project involves designing we replacement projects for aging an sewers throughout Detroit under the work also includes civil, structure mechanical, electrical, surveying, services. | d dysfunci<br>different ta<br>tural, arch | tional wat<br>sks on ar<br>itectural, | er mains and<br>n as-needed ba<br>hydraulics, |        |                    |           |           |           |           |           |           |       |                    |                      |
| 23 | Central Services Facility (CSF) Improvements (1)                                                                                                                                          | 004399                                    | 1188                                  | DWS-884A                                      | С      | 835                | 1,207     | •         |           |           |           |           | 1,207 | 4                  | CTA                  |
|    | The scope of work includes HVAC<br>doors replacement and other stru<br>rehabilitative work at the Central                                                                                 | ctural, me                                | chanical a                            | and electrical                                | d<br>, |                    |           |           |           |           |           |           |       |                    |                      |

Primary

#### **Sewage Disposal System**

#### **Capital Improvement Program**

#### Projected Expenditures Spread by Fiscal Year Active Projects

(000)

\* For information purposes only. Not counted in Total.

|    | Project Title                                                                                                                                       | DRMS<br>No.                | CIP No.                  | Contract No.                    | Туре   | Update* 2013-14 | 2014 - 15 2015 - 16 | 2016 - 17 | 2017 - 18 | 2018 - 19 | Remaining | Total | Project<br>Purpose | Allocation<br>Status |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|--------------------------|---------------------------------|--------|-----------------|---------------------|-----------|-----------|-----------|-----------|-------|--------------------|----------------------|
| C  | ombined Sewer Syste                                                                                                                                 | m                          |                          |                                 |        |                 |                     |           |           |           |           |       |                    |                      |
| 24 | Fischer Pumping Station Improvements                                                                                                                | 004174                     | 1093                     | CS-1421                         | S/D/CA | 2 275           | 149                 |           |           |           |           | 149   | 2                  | D                    |
|    | This project involves study, design services for the rehabilitation of the                                                                          | n, and con:<br>e Fischer i | struction<br>Pumping     | assistance<br>Station.          |        |                 |                     |           |           |           |           |       |                    |                      |
| 25 | Hubbell-Southfield CSO<br>Control Facility & In-System<br>Storage Gate Improvements                                                                 | 004424                     | 1190                     | PC-788                          | С      | 12,152          | 7,285               |           |           |           |           | 7,285 | 2                  | 83/17                |
|    | The scope of work includes select Hubbell-Southfield CSO facility. Tstorage gate improvements, upgraequipment installed at Puritan/FerRTBs.         | The work a<br>ades of se   | Iso includ<br>lect proce | des in-system<br>ess and contro | ol     |                 |                     |           |           |           |           |       |                    |                      |
| L  | ateral Sewer Replacer                                                                                                                               | nent                       |                          |                                 |        |                 |                     |           |           |           |           |       |                    |                      |
| 26 | East Side City of Detroit Sewer<br>Repair Contract for Inspection<br>and In-place Rehabilitation of<br>Existing Circular and<br>Non-Circular Sewers | 004341                     | 1201                     | DWS-876                         | DB     | 3,531           | 2,303               |           |           | ٠         |           | 2,303 | 3                  | <b>D</b> .           |
|    | This project will provide for inspect existing sewers using the construent equipment of trenchless pipe.                                            | ction proce                | ess, proc                | edures, metho                   | ods    |                 |                     |           |           |           |           |       |                    |                      |

as-needed basis.

#### **Sewage Disposal System**

#### **Capital Improvement Program**

#### Projected Expenditures Spread by Fiscal Year Active Projects

(000)

\* For information purposes only. Not counted in Total.

|    |                                                                                                                                                                                             |                                                            |                                                  |                                                                 |      |                 | (000)     |           |           |           |           |           |       | Duimoomi                      |                      |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|--------------------------------------------------|-----------------------------------------------------------------|------|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|-------|-------------------------------|----------------------|
|    | Project Title                                                                                                                                                                               | DRMS<br>No.                                                | CIP No.                                          | Contract No.                                                    | Туре | Update* 2013-14 | 2014 - 15 | 2015 - 16 | 2016 - 17 | 2017 - 18 | 2018 - 19 | Remaining | Total | Primary<br>Project<br>Purpose | Allocation<br>Status |
| 27 | West Side City of Detroit<br>Sewer Repair Contract for<br>Inspection and In-place<br>Rehabilitation of Existing<br>Circular and Non-Circular<br>Sewers                                      | 004342                                                     | 1200                                             | DWS-877                                                         | DB   | 5,449           | 2,669     |           |           |           |           |           | 2,669 | 3                             | D                    |
|    | This project will provide for insp<br>existing sewers using the const<br>and equipment of trenchless pip<br>as-needed basis.                                                                | ruction proce                                              | ss, proce                                        | edures, method                                                  |      |                 |           |           |           |           |           |           |       |                               |                      |
| In | formation Technolo                                                                                                                                                                          | gy                                                         |                                                  |                                                                 |      |                 |           |           |           |           |           |           |       |                               |                      |
| 28 | Data Center Reliability/Availability Improvements (1)                                                                                                                                       | 004367                                                     | 1206                                             | DWS-881                                                         | DB   | 660             | 1,500     | 733       |           |           |           |           | 2,233 | 4                             | CTA                  |
|    | The scope of work consists of a which will provide system improsystems, environmental service monitoring. This includes the Services Facility, Switch Room Service Facility - IS-226, and D | ovements for<br>e, fire protect<br>SCC, WBB, S<br>WWTP-NAE | both povi<br>ion, struc<br>witch Ro<br>3-B1, Dat | ver and UPS<br>tural wiring, an<br>om Central<br>a Center Centi |      |                 |           |           |           |           |           |           |       |                               |                      |
| 29 | SCADA Radio Network Upgrade (1)                                                                                                                                                             | 004369                                                     | 1207                                             | DWS-882                                                         | DB   | 1,980           | 1,900     | 446       |           |           |           |           | 2,346 | 3                             | CTA                  |
|    | The scope of work consists of in<br>Department's new SCADA Rad<br>radio wiring and cable, data con<br>connections, instrument wiring,                                                       | lio network ir<br>nnections, ar<br>network win             | ncluding la<br>ntenna ma<br>ing, and f           | ow voltage win<br>ounting and                                   | It   |                 |           |           |           |           |           |           |       |                               |                      |

also includes system improvements and planning, system and material procurement in support of the activities required for completing each

task.

#### **Sewage Disposal System**

#### **Capital Improvement Program**

#### Projected Expenditures Spread by Fiscal Year Active Projects

(000)

\* For information purposes only. Not counted in Total.

|    | Project Title                                                                                                                                                                                                                                                                                                                                   | DRMS<br>No. | CIP No. | Contract No. | Туре | Update* 2013-14 | 2014 - 15 | 2015 - 16 | 2016 - 17 | 2017 - 18 | 2018 - 19 | Remaining | Total     | Primary<br>Project<br>Purpose | Allocation<br>Status |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------|--------------|------|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------------------------------|----------------------|
| 30 | Consolidated Process Control<br>System Upgrades (1)                                                                                                                                                                                                                                                                                             | 004393      | 1153    | PC-773D      | DB1  | 1,188           | 1,500     | 920       |           |           |           |           | 2,420     | 3                             | CTA                  |
|    | System Upgrades (1)  This project involves integrating the control and monitoring network throughout all of the DWSD facilities with the new SCADA system installed under PC-713. The work includes control system hardw software, and firmware upgrade or replacement, also troubleshood installation, start-up, testing, and repair services. |             |         |              | e,   | \$101.311       | 2101 000  | \$62.838  | \$18.378  | \$4,071   |           | \$5,248   | \$255.534 |                               |                      |

## UP - Projects Under Procurement

A Project Under Procurement has:

- 1 an assigned DRMS number
- 2. not been issued the Notice to Start Work

Primary

#### Sewage Disposal System

#### **Capital Improvement Program**

#### Projected Expenditures Spread by Fiscal Year Projects Under Procurement

(000)

\* For information purposes only. Not counted in Total.

|    | Project Title                                                                                                                                                                                  | DRMS<br>No.                                | CIP No.                             | Contract No.                                      | Туре   | Update* 2013-14 | 2014 - 15 | 2015 - 16 | 2016 - 17 | 2017 - 18 | 2018 - 19 | Remaining | Total  | Project<br>Purpose | Allocation<br>Status |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-------------------------------------|---------------------------------------------------|--------|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|--------|--------------------|----------------------|
| Pr | rimary Treatment                                                                                                                                                                               |                                            |                                     |                                                   |        |                 |           |           |           |           |           |           |        |                    |                      |
| 1  | Pump Station No. 2 Pumping Improvements                                                                                                                                                        | 004215                                     | 961                                 | PC-795                                            | С      | 0               |           | 1,375     | 1,375     | 154       |           |           | 2,904  | 2                  | СТА                  |
|    | This project will restore the pump events based on study/design the                                                                                                                            |                                            |                                     | wet weather                                       |        |                 |           |           |           |           |           |           |        |                    |                      |
| Di | isinfection                                                                                                                                                                                    |                                            |                                     |                                                   |        |                 |           |           |           |           |           |           |        |                    |                      |
| 2  | Rouge River Outfall No. 2 (RRO-2) Segment 2-Conduit                                                                                                                                            | 004461                                     | 1250                                | CS-1541                                           | S/D/CA | 0 4             | 500       | 1,000     | 2,200     | 1,100     | 2,000     | 2,200     | 9,000  | 1                  | CTA                  |
|    | This project includes study, design services by consultant for approximation flow outfall conduit to the Rouge work are outfall gates, connection chlorination and dechlorination endormation. | imately 1,0<br>River. Also<br>n to the exi | 000 mgd o<br>included<br>sting outf | capacity gravit<br>d in the scope<br>all conduit, |        |                 |           |           |           |           |           |           |        |                    |                      |
| U  | rban System Improve                                                                                                                                                                            | ements                                     | <b>;</b>                            |                                                   |        |                 |           |           |           |           |           |           |        |                    |                      |
| 3  | West Side City of Detroit<br>Sewer Repairs Contract for<br>Inspection and In-Place<br>Rehabilitation of Existing<br>Circular and Non-Circular<br>Sewers                                        | 004422                                     | 1246                                | DWS-887                                           | DB     | 100             | 4,400     | 5,000     | 5,000     | 2,000     |           |           | 16,400 | 3                  | D                    |
|    | This project provides for in-place<br>the construction process, proced<br>trenchless pipeline rehabilitation                                                                                   | lures, meth<br>techniques                  | ods and e<br>for circu              | equipment of t<br>lar and non                     |        |                 |           |           |           |           |           |           |        |                    |                      |

circular sewers on the West-side of Detroit on an as-needed basis.

#### Sewage Disposal System

#### **Capital Improvement Program**

#### Projected Expenditures Spread by Fiscal Year Projects Under Procurement

(000)

\* For information purposes only. Not counted in Total.

|   | Project Title                                                                                                                                           | DRMS<br>No.            | CIP No.                 | Contract No.                   | Туре       | Update*<br>2013-14 | 2014 - 15 | 2015 - 16 | 2016 - 17 | 2017 - 18 | 2018 - 19 | Remaining | Total    | Primary<br>Project<br>Purpose | Allocation<br>Status |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------------------|--------------------------------|------------|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|----------|-------------------------------|----------------------|
| 4 | East Side City of Detroit Sewer<br>Repairs Contract for<br>Inspection and In-Place<br>Rehabilitation of Existing<br>Circular and Non-Circular<br>Sewers | 004423                 | 1245                    | DWS-886                        | DB         | 100                | 4,400     | 5,000     | 5,000     | 2,000     |           |           | 16,400   | 3                             | D                    |
|   | This project provides for in-place of the construction process, procedu trenchless pipeline rehabilitation to circular sewers on the East-side of       | res, meth<br>echniques | ods and e<br>for circul | equipment of the<br>ar and non | sing<br>ne | \$200              | \$9,300   | \$12,375  | \$13,575  | \$5,254   | \$2,000   | \$2,200   | \$44,704 |                               |                      |

## PC - Projects Pending Close-Out

A Project Pending Close-Out is a project that has:

- 1. an assigned DRMS number
- 2. been issued the Notice to Start Work
- 3. been substantially completed
- 4. project expenditures for the current fiscal year equal to \$100,000 or less with no projected expenditures

Primary

#### Sewage Disposal System

#### **Capital Improvement Program**

### Projected Expenditures Spread by Fiscal Year Projects Pending Close-out

(000)

\* For information purposes only. Not counted in Total.

|   | Project Title                                                                                                 | DRMS<br>No. | CIP No.  | Contract No.   | Туре   | Update* 2013-14 | 2014 - 15 2015 - 16 | 2016 - 17 2 | 2017 - 18 | 2018 - 19 | Remaining | Total | Project<br>Purpose | Allocation<br>Status |
|---|---------------------------------------------------------------------------------------------------------------|-------------|----------|----------------|--------|-----------------|---------------------|-------------|-----------|-----------|-----------|-------|--------------------|----------------------|
| P | rimary Treatment                                                                                              |             |          |                |        |                 |                     |             |           |           |           |       |                    |                      |
| 1 | New Troughs and Weirs for<br>Primary Clarifiers 13-16                                                         | 004173      | 962      | PC-756         | C .    | 4,342           | 43                  |             |           |           |           | 43    | 2                  | CTA                  |
|   | This project will involve rehabilita<br>Circular Primary Clarifiers (PCs)<br>used on PCs 17 and 18 (stainles. | 13-16. For  | new trou | ighs, the mate | erial  |                 |                     |             |           |           |           |       |                    |                      |
| 2 | Pump Station No. 2 Pumping<br>Improvements                                                                    | 004215      | 961      | CS-1444        | S/D/CA | 185             | 5                   |             |           |           |           | 5     | 2                  | CTA                  |
|   | This project involves evaluating a providing more reliable pumping                                            |             |          |                | r      |                 |                     |             |           |           |           |       |                    |                      |
| S | olids Handling                                                                                                |             |          |                |        |                 |                     |             |           |           |           |       |                    |                      |
| 3 | Rehabilitate Sludge Pump<br>Stations 1 and 2                                                                  | 004225      | 607      | CS-1467        | D/CA   | 79              | 5                   |             |           |           |           | 5     | 2                  | CTA                  |

This project will provide for general rehabilitation of the Sludge Pump Station Nos. 1 and 2, including sludge pump improvements to meet future sludge loads, heating and ventilation improvements and other miscellaneous building and utility improvements.

#### **Sewage Disposal System**

#### **Capital Improvement Program**

#### Projected Expenditures Spread by Fiscal Year Projects Pending Close-out

(000)

\* For information purposes only. Not counted in Total.

|   | Project Title                                                                                                                                                                                                                                                                    | DRMS<br>No.                                                                      | CIP No.                                                                | Contract No.                                                                          | Туре             | Update* 2013-14 | 2014 - 15 | 2015 - 16 | 2016 - 17 | 2017 - 18 | 2018 - 19 | Remaining | Total | Primary<br>Project<br>Purpose | Allocation<br>Status |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------------|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|-------|-------------------------------|----------------------|
| G | General Purpose                                                                                                                                                                                                                                                                  |                                                                                  |                                                                        |                                                                                       |                  |                 |           |           |           |           |           |           |       |                               |                      |
| • | 4 Underground Electrical Duct<br>Bank Repair and EB-1, EB-2,<br>and EB-10 Primary Power<br>Service Improvements - WWTP                                                                                                                                                           | 004181                                                                           | 366                                                                    | CS-1449                                                                               | S/D/CA           | 164             | 79        | ı         |           |           |           |           | 79    | 2                             | CTA                  |
|   | This project involves the necessary assistance work for repairing the 1s unit substation EB-1, EB-2, and EB switchgear DE-1, and two outdoor repair of building structure and assalso include site preparation, instanew electrical cable, coordination of system reconnections. | okv Prima<br>3-10, unit<br>3-phase p<br>sociated co<br>llation of r<br>of system | ry Switch 5kv subsi<br>orimary tro<br>omponen<br>new ducts<br>shut-dow | Gears A & B<br>tation and<br>ansformers; a<br>ts. The work<br>, placement o<br>n, and | ,<br>and<br>will |                 |           |           |           |           |           |           |       |                               |                      |
| S | Sewer Interceptor Syste                                                                                                                                                                                                                                                          | em                                                                               |                                                                        |                                                                                       |                  |                 |           |           |           |           |           |           | •     |                               |                      |
|   | 5 Sewer Meter Replacement                                                                                                                                                                                                                                                        | 004291                                                                           | 1167                                                                   | PC-784A                                                                               | С                | 1,280           | ŧ         | 5         |           |           |           |           | 5     | 4                             | CTA                  |

This project will provide for the implementation of the best sewer metering technology at several sewer metering locations. It will develop a control system configuration diagrams which will define the system components, communication structure, and operational interface, electrical interface, process flow diagrams, and process and instrumentation diagrams.

Primary

#### Sewage Disposal System

#### **Capital Improvement Program**

#### Projected Expenditures Spread by Fiscal Year Projects Pending Close-out

(000)

\* For information purposes only. Not counted in Total.

|   | Project Title                                                                                                                                                                                                                     | DRMS<br>No.                                           | CIP No.                                           | Contract No.                                                 | Туре   | Update* 2013-14 | 2014 - | 15 2015 | - 16 | 2016 - 17 | 2017 - 18 | 2018 - 19 | Remaining | Total | Primary<br>Project<br>Purpose | Allocation<br>Status |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|---------------------------------------------------|--------------------------------------------------------------|--------|-----------------|--------|---------|------|-----------|-----------|-----------|-----------|-------|-------------------------------|----------------------|
| C | Combined Sewer Syste                                                                                                                                                                                                              | m                                                     |                                                   |                                                              |        |                 |        |         |      |           |           |           |           |       |                               |                      |
| ( | Baby Creek CSO Pilot Control Facility                                                                                                                                                                                             | 003250                                                | 101                                               | PC-748                                                       | С      | 0               |        | 5       |      |           |           |           |           | 5     | 1                             | 83/17                |
|   | Construction of a screening/ disinit<br>Creek enclosure discharge point.<br>deep excavation and temporary ea<br>and effluent/ dewatering hydraulic<br>rehabilitation to existing interconn-<br>erection of a Control and Screenin | Major elei<br>arth retent<br>structures<br>ected hydr | ments of<br>ion syste<br>s, modific<br>aulic stru | the work inclu<br>ms, new influe<br>ation/<br>actures and    | de     |                 |        |         |      |           |           |           |           |       |                               |                      |
|   | 7 Oakwood CSO Control Facility<br>and Pump Station                                                                                                                                                                                | 004063                                                | 420                                               | CS-1364                                                      | S/D/C/ | A 185           |        | 5       |      |           |           |           |           | 5     | 1                             | 83/17                |
|   | This project includes study, design services for the Oakwood CSO comeet the MDEQ/NPDES permit retreatment, including disinfection, or protect public health.                                                                      | ontrol facili<br>equirement                           | ty and the<br>t to provid                         | e pump station<br>de adequate                                |        |                 |        |         |      |           |           |           |           |       |                               |                      |
|   | 8 Oakwood CSO Control Facility<br>and Pump Station                                                                                                                                                                                | 004063                                                | 420                                               | PC-755                                                       | С      | 0               |        | 5       |      |           |           |           |           | 5     | 1                             | 83/17                |
|   | This project includes construction<br>and the pump station to meet the<br>provide adequate treatment, inclu<br>sewage discharges to protect pub                                                                                   | MDEQ/NF<br>ding disinf                                | DES per                                           | mit requireme                                                |        |                 |        |         |      |           |           |           |           |       |                               |                      |
|   | 9 Bluehill Pumping Station<br>Rehabilitation                                                                                                                                                                                      | 004067                                                | 637                                               | PC-685                                                       | С      | 67              |        | 5       |      |           |           |           |           | 5     | 2                             | D                    |
|   | The work to be completed under the stormwater pump with VFD; replate pumps of 250 MGD capacity each dewatering pump; replacement of replacement of switchgear. This parchitectural, mechanical, electric                          | cement of<br>n; replacen<br>two 75 Hi<br>project als  | three exi<br>nent of st<br>Sanitary<br>o include  | isting stormwa<br>formwater<br>/ pumps; and<br>s structural, |        |                 |        |         |      |           |           |           |           |       |                               |                      |

#### **Sewage Disposal System**

#### **Capital Improvement Program**

#### Projected Expenditures Spread by Fiscal Year Projects Pending Close-out

(000)

\* For information purposes only. Not counted in Total.

|    | Project Title                                                                                                                                                           | DRMS<br>No.                | CIP No.                  | Contract No.                        | Туре | Update*<br>2013-14 | 2014 - 15 | 2015 - 16 | 2016 - 17 | 2017 - 18 | 2018 - 19 | Remaining | Total | Primary<br>Project<br>Purpose | Allocation<br>Status |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|--------------------------|-------------------------------------|------|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-------|-------------------------------|----------------------|
| 10 | Fischer Pumping Station Improvements                                                                                                                                    | 004318                     | 1093                     | PC-772                              | C 2  | 552                | 5         |           |           |           |           |           | 5     | 2                             | D                    |
|    | This project will involve the consti<br>Station Improvements.                                                                                                           | ruction for i              | the Fisch                | er Pumping                          |      |                    |           |           |           |           |           |           |       |                               |                      |
| In | formation Technolog                                                                                                                                                     | у                          |                          |                                     |      |                    |           |           |           |           |           |           |       |                               |                      |
| 11 | Customer Billing and<br>Management System (CBMS)<br>Upgrade (1)                                                                                                         | 004220                     | 1139                     | CS-1465                             | DB   | 0                  | 5         |           |           |           |           |           | 5     | 4                             | CTA                  |
|    | This project involves upgrading of enQuesta 2006 (Version 3.5). The the software. This project will also interfaces are updated to perform end-users and support staff. | ne consulta<br>o involve e | nt will ins<br>nsuring t | tall and config<br>hat the existing | 7    |                    |           |           |           |           |           |           |       |                               |                      |
| 12 | As Needed Technical Services (1)                                                                                                                                        | 004401                     | 1255                     | CS-1476                             | DB   | 1,187              | 18        |           |           |           |           |           | 18    | 4                             | СТА                  |
|    | This project is for the implemental<br>Oracle Financials (ebs) connective<br>system and an interface to system<br>application.                                          | rity, interfac             | ce to DW                 | SD's ESRIGIS                        |      |                    |           |           |           | <i>y</i>  |           |           |       |                               |                      |
|    |                                                                                                                                                                         |                            |                          |                                     |      | \$8,041            | \$185     | \$0       | \$0       | \$0       | \$0       | \$0       | \$185 |                               |                      |

## N - New Projects

A New Project is a project that:

- 1. does not have an assigned DRMS number
- 2. has a proposal
- 3. has never had expenditures charged against it

#### **Sewage Disposal System**

#### **Capital Improvement Program**

#### **Projected Expenditures Spread by Fiscal Year**

New Projects (000)

Amended FY 2015 CIP BOWC Approved July 9, 2014

\* For information purposes only. Not counted in Total.

|                     | (000)                                                                                                                                                                                                                                                                                                                                                                                                                       |                |               |            |      |                 |           |           |           |           |           |           |        | Primary            |                      |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------|------------|------|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|--------|--------------------|----------------------|
|                     | Project Title                                                                                                                                                                                                                                                                                                                                                                                                               | Contract No.   | Year Added    | CIP No.    | Туре | Update* 2013-14 | 2014 - 15 | 2015 - 16 | 2016 - 17 | 2017 - 18 | 2018 - 19 | Remaining | Total  | Project<br>Purpose | Allocation<br>Status |
| I                   | Primary Treatment                                                                                                                                                                                                                                                                                                                                                                                                           |                |               |            |      |                 |           |           |           |           |           |           |        |                    |                      |
| 1                   | Rehabilitation of Primary<br>Clarifiers Rectangular Tanks,<br>Drain Lines and Pipe Gallery                                                                                                                                                                                                                                                                                                                                  | PC-757         | 1999          | 291        | С    | 0               |           | 3,850     | 5,500     | 1,650     |           |           | 11,000 | 2                  | CTA                  |
|                     | The work to be completed under this project will include installing ventilation and atmospheric control for the rectangular primary pipe gallery; providing new lights and emergency lights, etc. This work also includes rehabilitation of 12 drain lines from rectangular clarifiers 3 thru 12, installation of large manhole with sump pumps to collect drainage and discharge to clarifier, and concrete crack repairs. |                |               |            |      |                 |           |           |           |           |           |           |        |                    |                      |
| Secondary Treatment |                                                                                                                                                                                                                                                                                                                                                                                                                             |                |               |            |      |                 |           |           |           |           |           |           |        |                    |                      |
| 2                   | Aeration System Improvement                                                                                                                                                                                                                                                                                                                                                                                                 | ts             | 2008          | 1194       | С    | 0               |           | 5,500     | 10,500    | 7,700     |           |           | 23,700 | 2                  | CTA                  |
|                     | The scope of work includes the information of A1 & A2 decks, replacement of and valves for decks nos. 3 & 4, for ILP nos. 3,4, & 7. The work winfluent gates and operators on a                                                                                                                                                                                                                                             | 0              | ,             |            |      |                 |           |           |           |           |           |           |        |                    |                      |
| 3                   | Process Improvements for the<br>Secondary Treatment at WWT                                                                                                                                                                                                                                                                                                                                                                  |                | 2008          | 1195       | С    | C               | )         |           |           |           |           | 1         | 1      | 2                  | CTA                  |
|                     | The scope of work involves the is system at Complex B, procure of to determine Phosphorus and Al Oxygen demand in real time, an secondary system.                                                                                                                                                                                                                                                                           |                |               |            |      |                 |           |           |           |           |           |           |        |                    |                      |
|                     | This project is being re-evaluate and schedule are likely.                                                                                                                                                                                                                                                                                                                                                                  | ed. Changes ii | n scope of wo | ork, cost, |      |                 |           |           |           |           |           |           |        |                    |                      |

#### **Sewage Disposal System**

#### Capital Improvement Program

#### Projected Expenditures Spread by Fiscal Year

**New Projects** 

(000)

Amended FY 2015 CIP BOWC Approved July 9, 2014

\* For information purposes only. Not counted in Total.

|   |                                                                                                                                                                                   |                                                         | · · · · · · · · · · · · · · · · · · · |         |       |                 |           |           |           |           |           |           | Primary |                    |                      |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|---------------------------------------|---------|-------|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|---------|--------------------|----------------------|
|   | Project Title                                                                                                                                                                     | Contract No.                                            | Year Added                            | CIP No. | Туре  | Update* 2013-14 | 2014 - 15 | 2015 - 16 | 2016 - 17 | 2017 - 18 | 2018 - 19 | Remaining | Total   | Project<br>Purpose | Allocation<br>Status |
|   | Solids Handling                                                                                                                                                                   |                                                         |                                       |         |       |                 |           |           |           |           |           |           |         |                    |                      |
| 4 | Rehabilitation of Central<br>Offload Facility                                                                                                                                     |                                                         | 2010                                  | 1221    | S/D/C | . 0             | 200       | 1,900     | 2,900     | 1,000     |           |           | 6,000   | 2                  | CTA                  |
|   | The scope of work consists of the replacement of the following equipments, three (3) Lime Silos, the conveyors and related conveyors system, HVAC, and other related Disinfection | uipment: three<br>three (3) Lime n<br>rs, electrical eq | (3) live Bottor<br>nixers, all scr    | n<br>ew |       |                 |           |           |           |           |           |           |         |                    |                      |
| 5 | Replacement of Chlorination<br>and Dechlorination Equipment<br>at the WWTP                                                                                                        |                                                         | 2010                                  | 1222    | С     | 0               |           | 550       | 2,750     | 1,100     |           |           | 4,400   | 2                  | СТА                  |
|   | The work will consist of installa fourteen (14) sulfonators, and to equipment mandated by regula                                                                                  |                                                         |                                       |         |       |                 |           |           |           |           |           |           |         |                    |                      |
| 6 | Rouge River Outfall No. 2 (RRO-2) Segment 2-Conduit                                                                                                                               |                                                         | 2012                                  | 1250    | С     | 0               |           |           |           | 8,000     | 27,000    | 44,000    | 79,000  | 1                  | СТА                  |

This project includes construction of approximately 1,000 mgd capacity gravity flow outfall conduit to the Rouge River. Also included in the scope of work are outfall gates, connection to the existing outfall conduit, chlorination and dechlorination equipments, pumps, and actuators.

#### **Sewage Disposal System**

#### **Capital Improvement Program**

#### Projected Expenditures Spread by Fiscal Year

**New Projects** 

(000)

Amended FY 2015 CIP BOWC Approved July 9, 2014

\* For information purposes only. Not counted in Total.

|   |                                                                                                                                                                                                                                        |                                                                                          |                                                                                   |                                           |       |                 | (000)     |           |           |           |           |           |        | Primary            |                      |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------|-------|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|--------|--------------------|----------------------|
| _ | Project Title                                                                                                                                                                                                                          | Contract No.                                                                             | Year Added                                                                        | CIP No.                                   | Туре  | Update* 2013-14 | 2014 - 15 | 2015 - 16 | 2016 - 17 | 2017 - 18 | 2018 - 19 | Remaining | Total  | Project<br>Purpose | Allocation<br>Status |
| ( | General Purpose                                                                                                                                                                                                                        |                                                                                          |                                                                                   |                                           |       |                 |           |           |           |           |           |           |        |                    |                      |
| 7 | Study/ Repair Potable Water,<br>Screened Final Effluent, Natur<br>Gas and Compressed Air Pipe<br>Lines at the WWTP                                                                                                                     |                                                                                          | 2006                                                                              | 1140                                      | S/D/C | 0               |           | 50        | 350       | 2,800     | 1,800     |           | 5,000  | 2                  | CTA                  |
|   | This project will include the repa<br>corroded pipes, valves, and fittin<br>system, natural gas system, SFL<br>system. It also includes installat<br>supply air to the pneumatic tools                                                 | ngs for the pota<br>E system, and<br>tion of a compr                                     | ble water sup<br>compressed<br>essed air sys                                      | oply<br>air                               |       |                 |           |           |           |           |           |           |        |                    |                      |
| 8 | Rehabilitation of Grit and<br>Screening System at PS # 2 at<br>Rehabilitation of Sampling Sit<br>at WWTP                                                                                                                               |                                                                                          | 2010                                                                              | 1223                                      | С     | 0               |           | 2,750     | 4,950     | 2,300     |           |           | 10,000 | 2                  | СТА                  |
|   | The work consists of modification grit and screening handling systems also includes removal, and instapiping, housing, and related equiplefferson, Oakwood, MPI 2, NE, 3 and 4, ML 1 thru 4, RAS 1 thrus improvements will enable WWT. | em at pump sta<br>allation of new s<br>ipment. Samp<br>IA, PE, River F<br>u 4, and C2E 3 | ation #2. The<br>samplers, pur<br>ling sites incl<br>Rouge Outfall,<br>and 4. The | e work<br>mps,<br>lude<br>, PEAS 1,<br>se |       |                 |           |           |           |           |           |           |        |                    |                      |
| 9 | Rehabilitation of the Main Plan<br>Maintenance Building,<br>Replacement of Various Plant<br>Maintenance Areas and Work<br>Environment Improvement                                                                                      | :                                                                                        | 2011                                                                              | 1237                                      | S/D/C | 0               | ı         | 500       | 1,000     | 6,000     | 5,400     |           | 12,900 | 3                  | CTA                  |

The scope of work consists of studying existing maintenance facilities and evaluation of suitable modifications to consolidate the maintenance areas and provide sufficient storage. The work also will provide for new maintenance areas, rehabilitate Primary Treatment maintenance areas: i.e., Main Plant Maintenance building, shops, work and storage areas for Pump Station no. 1, replace loading dock on the Rack and Grit building and Complex 1, rehabilitate basement of the Rack and Grit building for equipment storage, and provide work environment improvements at the Waste Water Treatment Plant.

### Sewage Disposal System

## **Capital Improvement Program**

### Projected Expenditures Spread by Fiscal Year

**New Projects** 

(000)

Amended FY 2015 CIP BOWC Approved July 9, 2014

\* For information purposes only. Not counted in Total.

|    | (000)                                                                                                                                         |                                   |                                 |           |       |                 |           |           | Primary   |           |           |           |        |                    |                      |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------------------------|-----------|-------|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|--------|--------------------|----------------------|
|    | Project Title                                                                                                                                 | Contract No.                      | Year Added                      | CIP No.   | Type  | Update* 2013-14 | 2014 - 15 | 2015 - 16 | 2016 - 17 | 2017 - 18 | 2018 - 19 | Remaining | Total  | Project<br>Purpose | Allocation<br>Status |
| 10 | Wastewater Treatment Plant<br>Allowance                                                                                                       |                                   | 2012                            | 1257      | D/C   | 4,000           | 10,000    | 10,000    | 10,000    | 10,000    | 10,000    |           | 50,000 | 3                  | СТА                  |
|    | This is an Allowance for unplant<br>replacement/rehabilitation, critic<br>project, etc. at the Wastewater T<br>Operation Facilities.          | al asset replac                   | ement, energ                    | y saving  | r     |                 |           |           |           |           |           |           |        |                    |                      |
| \$ | Sewer Interceptor Sy                                                                                                                          | stem                              |                                 |           |       |                 |           |           |           |           |           |           |        |                    |                      |
| 11 | Interceptor Allowance                                                                                                                         |                                   | 2013                            | 1263      | D/Ç   | 0               | 5,000     | 5,000     | 5,000     | 5,000     | 5,000     |           | 25,000 | 3                  | CTA                  |
|    | Yearly allowance for evaluation<br>and other large diameter sewers                                                                            |                                   | ion of the inte                 | erceptors |       |                 |           |           |           |           |           |           |        |                    |                      |
| (  | Combined Sewer Sys                                                                                                                            | stem                              |                                 |           |       |                 |           |           |           |           |           |           |        |                    |                      |
| 12 | Fairview Pumping Station -<br>Replace Four Sanitary Pumps                                                                                     | ;                                 | 2011                            | 1241      | С     | 0               |           | 6,000     | 5,100     |           |           |           | 11,100 | 3                  | CTA                  |
|    | The scope of work consists of the pumping systems including inlet hydraulics. This will also including roadways, and upgrade of electrosters. | t and discharge<br>e enlarging do | e valves and v<br>orways, revar | wet well  |       |                 |           |           |           |           |           |           |        |                    |                      |
| 1  | Urban System Impro                                                                                                                            | vements                           |                                 |           |       |                 |           |           |           |           |           |           |        |                    |                      |
| 13 | Sewer Replacement Allowand                                                                                                                    | e                                 |                                 | 448       | D/C   | 100             | 1,000     | 1,000     | 15,000    | 20,000    | 20,000    |           | 57,000 | 3                  | D                    |
|    | Yearly allowance to replace agii                                                                                                              | ng sewer lines                    | in the City.                    |           |       |                 |           |           |           |           |           |           |        |                    |                      |
| l  | Information Technol                                                                                                                           | ogy                               |                                 |           |       |                 |           |           |           |           |           |           |        |                    |                      |
| 14 | Replacement of LIMS / PIMS Software System                                                                                                    |                                   | 2010                            | 1224      | S/D/C | ; c             | )         |           |           |           |           | 5,000     | 5,000  | 4                  | CTA                  |
|    | The scope of work consists of the installation of the LIMS / PIMS sidentifiying major tasks to be perequirements, testing, and training       | software system<br>erformed and c | m. This will in                 | nclude    |       |                 |           |           |           |           |           |           |        |                    |                      |

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#### **Sewage Disposal System**

#### **Capital Improvement Program**

## Projected Expenditures Spread by Fiscal Year

New Projects (000)

Amended FY 2015 CIP BOWC Approved July 9, 2014

\* For information purposes only. Not counted in Total.

|                                                                                                       |                |               |         |      |                    | (000)     |           |           |           |           |           |           | Primary            |           |
|-------------------------------------------------------------------------------------------------------|----------------|---------------|---------|------|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------------------|-----------|
| Project Title                                                                                         | Contract No.   | Year Added    | CIP No. | Туре | Update*<br>2013-14 | 2014 - 15 | 2015 - 16 | 2016 - 17 | 2017 - 18 | 2018 - 19 | Remaining | Total     | Project<br>Purpose | Anocation |
| 15 IT Systems Allowance (1)                                                                           |                | 2013          | 1262    | DB   | 0                  | 3,000     | 1,500     | 1,500     | 1,500     | 1,500     |           | 9,000     | 4                  | CTA       |
| This is an allowance for the pro<br>for the replacement or upgrade<br>systems, software licensing, ar | of the departm | ent's compute |         |      |                    |           |           |           |           |           |           |           |                    |           |
|                                                                                                       | ,              |               |         |      | \$4,100            | \$19,200  | \$38,600  | \$64,550  | \$67,050  | \$70,700  | \$49,001  | \$309,101 |                    |           |

# **EXHIBIT 11**

STATE OF MICHIGAN,
City of Detroit

# CITY CLERK'S OFFICE, DETROIT Janice M. Winfrey

| Janice M. Winire                                     | y                          |                         |
|------------------------------------------------------|----------------------------|-------------------------|
| I,                                                   | , City Clerk of the RESO   | City of Detroit, in sai |
| State, do hereby certify that the annexed paper is a | TRUE COPY OF               |                         |
| adopted (passed) by the City Council at session of   | October 18,                | 01                      |
|                                                      |                            | 20                      |
| nd approved by Mayor                                 | October 19,                | 01                      |
|                                                      |                            | 20                      |
| whole of such original.                              |                            |                         |
|                                                      | In Witness Whereof, I have | hereunto set my ha      |
|                                                      | and affixed the corporate  | seal 8fh said City,     |
|                                                      | Detroit, thisAugust        | . 00                    |
|                                                      |                            |                         |
|                                                      | day of                     | A.D. 20                 |
|                                                      | day of                     | A.D. 20                 |

: :::

ORDINANCE NO. 18-01 TO AUTHORIZE THE

ORDINANCE NO. 19-01
TO AUTHORIZE THE
ISSUANCE
OF SEWAGE DISPOSAL
SYSTEM REVENUE BONDS
An Ordinance to Amend Ordinance No.
27-86 se Amended and Supplemented by Ordinance No. 7-87,
Ordinance No. 38-82, Ordinance No.
3-83, Ordinance No. 31-86, Ordinance No.
3-83, Ordinance No. 31-86, Ordinance No.
3-89, Ordinance No. 3-90 of the City of Detroit to Provide for a Means of Determining if Certain Junior Lene
Bonds Bear Interest at a Fixed Rate or a Variable Rate, Change the Reserve Account Requirement for Second Lien Bonds, Facilitate the Use of Detr Service Reserve Fund Surety Bonds by Amending Section 8, and to Amend and Restate Ordinance No. 27-86.
Whereas, The City Council (the Council) of the City of Detroit, Michigan, adopted Ordinance No. 27-86 (the Ordinance) on December 9, 1986, to provide for the financing and refinancing of capital Improvements to the Sewage Disposal System by the Issuance of Sewage Disposal System Revenue Bends and Revenue Refunding Bonds and Junior Len Bonds, and has extensively amended the Ordinance seven times since its adoption in 1986; and

the Ordinance seven times since its adop-tion in 1986; and Whereas, The Council has determined that it is in the best interest of the City to amend the Ordinance so as to provide a means of determining it certain Junior Lien Bonds bear interest at a fixed or variable rate and to change the Reserve Account Requirement for Second Lien Bonds, such amendment to take effect upon this amendatory ordinance becoming effec-tive; and

amendatory ordinance becoming effective; and
Whereas. The Council has determined that it is in the best interest of the City to further amend the Ordinance and to restate the Ordinance so as provide for more efficient financings that reflect current capital market practices, eliminate obsolete provisions and integrate this amendment and all prior amendments into one ordinance, such amendment to take effect upon receiving consent of the regulate percent of holders of outstanding Bonds and Junior Lien Bonds; and Whereas, Section 8 of the Ordinance (Section 8) provides for the use of surety bonds (Raserve Account Surety Bonds) to meet the City's obligations, from time to time, to fund Bond Reserve Accounts; and Whereas, Section 8 contains certain ambiguous and defective provisions regarding the psyment obligations of the City in certain instances; and Whereas, Funding Reserve Accounts with Bond proceeds increases the aggregate principal amount of bonds issued to finance capital improvements to the System and can increase the cost of capital and thereby diminish limited capital resources to be directly used for System purposes; and Whereas, The necessity of investing Reserve Accounts funded with Bond proceeds can result in market and credit volatility and can result in an insufficiency of funds if and when the Reserve Account is needed to provide dobt service payments; and tive; and
Whereas, The Council has determined

Whereas, Reserve Account Surely Bonds can result in debt service savings and other economic efficiences; and Whereas, it is in the best interest of the city and Bondholders that the most efficient use be made of the ability to borrow under the Ordinance and otherwise use capital resources; and Whereas, There can be a material adverse effect on the City and Bondholders if the ability to borrow and capital resources are not used efficiently; and

Whereas, The Council determines that it is in the best interests of the City and the Bondholders to amend Section 8 so as to assure the availability of Reserve Account Surely Bonds and that Bondholders may be materially adversely affected if Reserve Account Surely Bonds are not freely available in connection with financing the System; and Whereas, in light of the foregoing, the Council further determines that amendments herein contained do not have a material adverse effect on the interests of Bondholders but rather enhance the ability of the City to obtain Reserve Account Surely Bonds.

The City of Despoit Ordaine:

The City of Detroit Ordains:

Part I
Section 1. Immediate Amendment of
Ordinance No. 27-88.

(a) Amendment Ordinance No. 27-88
as amended to the date hereof is hereby
amended by adding three new sections
thereto as "Section 1A" "Section 1B" and
Section 8 to respectively read as follows:
Section 1A. Detarmination of Fixed
Rafe and Variable Rafe Junior Lien
Bonds.

Bonds.

(a) Applicability. This Section is applicable to all Junior Lien Bonds other than SRF Junior Lien Bonds (the "Subject Junior Lien Bonds").

(b) Generally. Notwithstanding any provision of this Ordinance to the contrary, this Section shall govern the following determinations:

trary, this Section shall govern the following determinations:

(1) Whether a Subject Junior Lien Bond is a Variable Rate Junior Lien Bond (a "Variable Rate Security") or a Fixed Rate Junior Lien Bond (a "Fixed Rate Junior Lien Bond (a "Fixed Rate Security") for all purposes of this Ordinance.

(2) How interest is to be calculated on such Variable Rate Securities and Fixed Rate Securities for the purpose of determining Maximum Annual Debt Service, and all definitions and determination of this Ordinance based on or derived from Maximum Annual Debt Service.

(c) Definitions of Fixed Rate Securities and Variable Rate Securities.

Securities.

Tited Rate Security" means a Subject Junior Lien Bond that bears inferest at a rate that has been fixed for at least a five-year period that includes all of the Fiscal tear for which a calculation of Annual Debt Service is made.

(1) If the Fiscal Year for which a calculation of Annual Debt Service is made includes only a portion of such five year period, a Security is also a "fixed Rate Security" but only for such portion.

(2) A rate is fixed for purposes of determining whether a Security is a "Fixed Rate Security" it the economic effect of a Security is a security bearing interest at a fixed rate is produced by a Qualified Hedge or by Counterpart Securities.

(3) A rate is not based for purposes of

Counterpart Securities.
(3) A rate is not fixed for purposes of determining whether a Security is a "Fixed Rate Security" if the economic effect of a Security bearing interest at a variable rate is produced by a Qualified Hedge.
"Variable Rate Security" means a Subject Junior Lien Bond that is not a Fixed Rate Security.
(d) Interest Calculations — Variable Rate Securities.

(d) Interest Calculations — Variable
Rate Securities.

(1) If a Variable Rate Security has
been Outstanding for less than a full
facet Year on the date of calculation, then
the interest rate on such Variable Rate
Security shall be calculated as 125% of
the average of the Bond Market
Association (BMA) Municipal index to the
five-year period ending not more than one
week before the date of such calculation.

(2) If Variable Rate Securities have (2) If Variable Rate Seourities have been Outstanding for one or more full Fiscal Years on the date of calculation, then the interest rate on such Variable Rate Securities shall be calculated as 125% of the annualized everage daily rate borne by such Variable Rate Securities the title 12 calendar month period ending immediately before the month of calcula-tion.

borne by such variable Hate securities to the 12 calendar month period ending immediately before the month of calculation.

(a) Interest Calculations — Fixed Rate Securities Convertible to Variable Rate Securities.

If Subject Junior Lien Bonds are issued as Fixed Rate Securities but are intended to convent by their terms to Variable Rate Securities are to such that the Securities during a future Fiscal Year or any Fiscal Year thereafter, then the Fiscal Year of conversion shall be the first Fiscal Year of conversion shall be the first Fiscal Year that such Securities are Cutstanding for the purposes of calculating interest at a variable rate.

(f) Other Definitions.

BMA Material Index means the Index based upon the weekly interest rates of tax-exempt variable rate issues included in a database maintained by Municipal Market Data, Boston, Massachusetts, a Thompson Financial Services Company (or its successor), which meet specific orteria established by The Bond Market Association.

Bond insurance means any policy of insurance, contract of surelyahly, guaranty or other agreement intended to protect Holders of particular Securities from loss arising from a failure of the City to timely pay principal (and premium, if any) of anterest on such Securities from loss arising from a failure of the City to timely pay principal of and premium or annual tee).

Counterpart Securities and pursuant to which the provider thereof is repaid solely as subropes without creating any additional paymnt obligations (other than the payment of a premium or annual tee).

Counterpart Securities means solventies and boutstanding at the same time.

"Credit Enhancement" means any Credit in order to constitute "Counterpart Securities" means any cities of the City to timely pay principal of and interest on such Securities and posture of particular Securities much securities of particular Securities much securities of particular Securities much securities of particular Securities of particular Securities on the city to timely pay principal of

to timely pay principal of and interest or such Becurities other than Bord Insurance. "Hedge" means any spreement by which the City is authorized or permitted by law to manage ha debt service, either in connection with the issuance of Securities or in connection with its then curstanding Securities, including, but not limited to, interest rate exchanges or swaps, hedges and similar agreements. "Cualified Hedge" means a Hedge with a counterparty that is rated directly or indirectly by a Rating Agency in a rating category at least equal to the category in which the subject Securities are rated without benefit of Credit Enhancement and without reference to qualifications such as "plus" or "minus". If the subject Securities are not mated without the benefit of Credit Enhancement, then the rating category of such Securities shall be the rating category with the benefit of Credit Enhancement.
"Securities" means any Subject Junior Lan Border

"Securities" means any Subject Junior

Contineer hears any surgest staint. Use Bonds, Section 1.8. Second Lien Bond Reserve Requirement.

Notwithstanding any provision of this Ordinance to the contrary, whenever this Ordinance provides for a determination of Maximum Annual Debt Service for purposes of determining the Second Lien Bond Reserve Requirement, a determination of everage Annual Debt Service as of the date of issuance shall be made instead, and such determination shall be sufficient for all purposes of this Ordinance with respect to the Second Lien Bond Reserve Requirement as it relates to Maximum Annual Debt Service.

Section 8. Municipal Bond Insurance or other Credit Enhancement. The Finance Director may obtain municipal bond Insurance or other credit enhancement in respect of all or part of the Series 1986 Bonds or any Additional Bonds which, if obtained, shall be provided for in the resolution authorizing the sale of the Series 1986 Bonds or any Additional Bonds. Such municipal bond insurance or other credit enhancement may only insure or secure certain Bonds and may or may not insure or secure any other series of Bonds or any part thereof. Such municipal bond insurer or other credit enhancement provider may be afforted certain rights and remedies to direct the proceedings with respect to the enforcement of payment of the Bonds as shall be provided in the resolution authorizing the sale of the Series 1986 Bonds or rizing the sale of the Series 1986 Bonds or

rizing the sale of the Series 1986 Bonds or Additional bonds.

The City may at any time fulfill its obligation to fund all or a portion of the Bond Reserve Account by acquiring for the benefit of the Bond Reserve Account an immocable surety bond payable on any interest or interest and principal payment date in an amount which, when added to any other funds in the Bond Reserve Account, equals the Bond Reserve Requirement. Before any such surety bond is substituted. est or interest and principal psyrimin date in an amount which, when added to any other funds in the Bond Reserve Account, equals the Bond Reserve Account, sequals the Bond Reserve Account, there shall be filed with the Commissioners (i) an opinion of nationally recognized bond counsel to the effect that such substitution will not achieves a first the tax-exempt status of interest on any Bonds; (ii) evidence that such surely bond is provided by an insurance company rated by each Rating Agency then rating the Bonds to the effect that if the issuers of the surely bond were insuring payment of principal and interest of the Bonds to which the Bond would receive the highest rating available from each such Rating Agency; (iii) a copy of the surely bond; and (iv) an opinion of counsel satisfactory to such rationally recognized bond counsel to the effect that it surely bond; and (iv) an opinion of counsel satisfactory to such rationally recognized bond counsel to the effect that the surely bond is valid and enforceable in accordance with its terms. Each such surely bond shall be unconditional and invocable and shall provide debt service reserve security for the Bonds with respect to which the surely bond is purchased with respect to more than one issue of Bonds, then for the term of all the then outstanding Bonds for which such surely bond is purchased with respect to more than one issue of Bonds, then for the term of all the then outstanding Bonds for which such surely bond is purchased with respect to more than one issue of Bonds, then for the term of all the then outstanding Bonds for which such surely bond is purchased with respect to more than one issue of Bonds, then for the term of all the then outstanding Bonds for which such surely bond is purchased with respect to more than one issue of Bonds, then for the benefit of the issuer of any such surely bond may provide that the City will be obligated to repay such issuer on amount equal to any drawdown on the surely bond plus the issuer's expenses and interest, but

(ii) to grant to the issuer of such surety bond such additional rights as it may request, provided that such amendment shall not, in the written opinion of nationally by recognized bond counsel filed with the Commissioners, materially impair or

reduce the security or rights hereby granted to the owners of the 517-E Bonds or the Bonds or any of them.

(b) Inconsistent Amendments.

The amendments contained in this Part I shall prevail to the extent of any inconsistency between these amendments and the amendments identified in Ordinance 36-99 as the "Bondholder Approval Amendments" upon the Bondholder Approval Amendments becoming effective by obtaining the regulsite consent.

Part II

Amendment to Amend and Restate Ordinance No. 27-86, as amended to the date hereof (including provisions to take effect upon consent of the owners of Senior Lien Bonds and dunlor Lien Bonds outstanding on the effective date of

Senior Lien Bonds and Junior Lien Bonds outstanding on the effective date of Ordinance No. 36-99), is hereby amended to read as follows, such amendment to take effect as provided in Part III: Section 1. Definitions. Whenever used in this Ordinance, except when otherwise indicated by the contact, the following terms shall have the following manipuse:

context, the following terms shall have the tollowing meanings:
"Act 94" means Act 94, Public Acts of Michigan, 1933, as amended.
"Act of Council" means a resolution or ordinance of the Council, as required or permitted by law to sufforize or otherwise give effect to the subject matter thereof.
"Ancillary "Obligation" means any Relmbursement Obligation and any Hedoe Obligation.

Helmbursement Obligation and any Hedge Obligation.

Ancillary Obligation Feee and Expenses means any fees and expenses in connection with any Hedge or Financial Facility in the ordinary course of the trans-

Facility in the ordinary course of the transaction.

"Bond Insurance" means any policy of insufance, contract of suretyship, guaranty or other agreement intended to protect Holders of particular Securities from lose arising from a failure of the City to timety pay principal (and premium, if any) of and interest on such Securities and pursuant to which the provider thereof is repaid solely as subropes without creating any additional payment obligations (other than the payment of a premium or annual fee). "City" means the City of Detroit, County of Wayne, State of Michigan.

"Code" means the linternal Revenue Code of 1986, as it may be amencied.

"Commissioners" means the Board of Water Commissioners of the City created by Article 7, Section 7-1501, of the Charter of the City or any successor body.

"Construction Fund" means the tund established pursuant to Section 14.

"Council means the City Council of the City.

"Credit Enhancement" means any

"Council" means the City Council of the City.
"Credit Enhancement" means any Credit Facility and any Bond Insurance.
"Credit Facility" means any letter of credit, line of credit, purchase agreement, or other finencial arrangement intended to protect Holders of particular Securities from loss arising from a failure of the City to timely pay principal of and interest on such Securities other than Bond Insurance.

such Securities other than Bond insurance.

"Debt Service Installment Requirement means, as of the first day of each month with respect to a Priority of Outstanding Securities and Ancillary Obligations, if any, the total for superiority of Outstanding Securities and Ancillary Obligations, if any, the total for superiority of Outstanding Securities and Ancillary Requirement, if any.

"Extraordinary Repair and Replacement Maximum Requirement means, for any Fiscal Year, 15% of the budgeted operation and maintenance expense of the System for such Fiscal Year isse in the Fiscal Year any amount that is withdrawn from the Extraordinary Repair and Replacement Reserve Fund for paying a major unanticipated repair or replacement to the System pursuant to Section 13D, but only in the Fiscal Year that euch amount is withdrawn.

"Extraordinary Repair and Replacement Minimum Requirement" means, for any Fiscal Year, 1/12 of 3% of the budgetment Minimum Requirement means, for any Fiscal Year, 1/12 of 3% of the budgeted operation and maintenance expense of the System for such Fiscal Year plus 
such amount as is necessary to restore to 
the Extraordinary Repair and Replacement Reserve Fund any amount credited 
to the Improvement and Extraelon Fund. 
"Finance Director" means the Finance 
Director of the City. 
"Financial Facility" means any Credit 
Enhancement, Liquidity Facility, 
"Fiscal Year" means the fiscal year and 
operation year of the City which begins on 
July 1 and ends on the following June 30 
as it may be modified. 
"Hedge" means any agreement by 
which the City is authorized or permitted 
by law to manage its debt service, either 
in connection with the issuance of 
Securities or in connection with the them 
outstanding Securities, including, but not 
limited to, interest rate exchanges or 
swaps, hedges and similar agreements. 
"Hedge Obligations under a Hedge other 
than the obligation to pay fees and 
expenses in the ordinary course of the 
transaction. 
"Hedge Termination Payment" means

expenses in the ordinary course of the transaction. "Hedge Termination Payment" means an amount payable by the City under a Hedge by reason of the early termination

"Hedge Receivable" means any amount receivable by the City under a Hedge including any amount by reason of the early termination thereof. "Holder" means the Person in whose name a Security is registered in the Realistry.

Registry.
"Indebtedness" has the meaning given that term in Section 2.

Interest and Redemption Fund means

that term in Section 2.

"Interest and Redemption Fund" means any Interest and Redemption Fund established for a Priority of Securities.

"Interest Installment Requirement" means, as of the first day of each month in a Fiscal Year, with respect to a Priority of Securities and Anciliary Obligations, the amount of interest accrued and unpaid and to accrue to and including the last day of such Priority and related Anciliary Obligations that constitute interest, if any, next coming due in such Fiscal Year.

"Junior Chipations" means all Securities issued pursuant to this Ordinance other than Senior Lien Bonds.

"Junior Obligations" means all Junior Lien Bonds and all Anciliary Obligations that are not Senior Obligations.

"Legal Investment" means, with respect to any particular amounts, an investment that is authorized or permitted by law as an investment of such amounts.

"Liquidity Facility" means any letter of credit, line of credit, purchase agreement, or other financial arrangement intended to Securities in the event of a failure of the remarketing thereof but does not include any protection provided by a Credit Facility.

"Mandatory Redemption Date" means

any protection provided by a Credit Facility.

"Mandatory Redemption Date" means a date on which Term Securities in the principal amount of the applicable Mandatory Redemption Requirement are required to be redeemed under the Supplemental Action authorizing the sale of such Securities.

"Mandatory Redemption Requirements" means, with respect to any Term Securities, the principal amount of such Securities required to be called for redemption prior to their stated maturity as provided in the ordinance authorizing the issuance or in the resolution providing for the sale of such Term Securities.

"Net Revenues" means Revenues except for those Revenues credited to the Operation and Maintenance Fund,

"Outstanding", unless otherwise provided in a Supplemental Action for particular ed in a Supplemental Action for particular Seourities, means, as of any date and with respect to Securities of a particular Priority, all Securities of such Priority delivered under this Ordinance except;

(i) Seourities of such Priority theretoers paid or redeemed or acquired by the City and surrendered to the Transfer Agent for cancellation;

(ii) Seourities at such Priority that have

Agent for cancelletion;
(ii) Seourilles of such Priority that have matured or have been duly called for redemption and for the payment or redemption of which amounts, together with any unpaid interest, are held by the Trustee or the Paying Agent for the payment thereot;
(iii) Seourilles of such find the payment thereot;

(iii) Securities of such Priority that this Ordinance or a Supplemental Action;

(iv) Securities of such Priority in (iv) Securities of such Priority in exchange for or replacement of which other Securities of such Priority have been authenticated and delivered pursuant to this Ordinance or a Supplemental Action.

"Permitted Investment" means, with respect to any particular amounts, a Legal investment subject to such limitations as may be improved by this Ordinance or a

may be imposed by this Ordinance or a Supplemental Action for the investment of such amounts.

such amounts.

"Porson" means any natural person, firm, association, corporation, trust, partnership, Joint venture, Joint-stock company, municipal corporation, public body or other entity, however organized.

"Piedged Assats" means:

(i) Net Revenues;
(ii) the funds and accounts established by or pursuant to this Ordinance except for the Operation and Maintenance Fund and the Construction Fund and any

and the Construction Fund and any

(iii) Investments of amounts credited to any fund, account or subaccount that is a

Fiedged Asset; an income or gain realized from investments that ere Pledged Assets to the extent that such income or gain is not a Net Revenue.
"Principal inetaliment" means, with

a Not Revenue.

Principal installment' means, with respect to Securities of a Priority and related Ancillary Obligations, if any, the principal amount of such Securities that are not Term Securities and such of the Ancillary Obligations related to such Securities, if any, that constitute principal or other return of capital.

Principal installment Requirement' meens, as of the first day of each month in a Fiscal year, with respect to a Priority of Obligations, the amount of Principal Installments accrued and unpaid and to accrue to, and including, the last day of such month (assuming that principal accrues on the basis of 30-day months is a year of 350 days) on Outstanding Securities of such Priority and related Ancillary Obligations, if any, next coming due in such Fiscal Year.

Priority' means, with respect to any particular Secured Obligation, all other Secured Obligations having a lien on Pledged Assets on a parity with such Obligation.

Fating Agency' means any nationally.

Plodged Assets
Obligation.
Tating Agency means any nationally recognized statistical rating organization as defined in Rule 15c3-1 of the United States Securities and Exchange

as defined in Rule 15c3-1 of the United States Securities and Exchange Commission.

"Reimbursement Obligation" means the City's repayment obligations under a Financial Facility, and does not include the obligation to pay fees and expenses in the ordinary course of the transaction.

"Registry" has the meaning given that term in Section 3.

"Required Combined Coverage" means, for two or more Priorities for which a determination is to be made, that (i) the result produced by dividing the prescribed inflows by the prescribed outflows for the highest Priority required for such determination and performing the same calculation for each successively lower Priority and expanding the divisor in each instance by the sum of the outflows for such Priority and each higher Priority equals or exceeds (ii) the coverage requirement for the lowest Priority in each calculations, such that calculations, such that

Where I = inflows required by the par-ticular determination
O = Outliness required by the particular determination for the Priority Indicated by the

the Priority indicated by the subscript

C = Coverage requirement for the particular determination for the Priority indicated by the subscript and assuming three Priorities, [1] Senior, [2] Second and [3] SRF, Required Combined Coverage is:

 $[1] \frac{1}{O_1} \ge C_1$  and  $[2] \frac{1}{(O_1 + O_2)} \ge C_2$  and

[3] 
$$\frac{1}{(O_1 + O_2 + O_3)} \ge C_4$$

"Reserve Account" means a Reserve Account established in an interest and Redemption Fund and may be restricted in meaning by referring to a Priority of Securities for which such Reserve Account was established.

"Reserve Requirement" means, for a Priority of Securities for which a Reserve Account has been established, the amount of Annual Debt Service on all Securities of euch Priority then Outstanding for the current or any tuture Fiscal Year or the maximum amount permitted by the Code as provided below:

(i) for Senior-Len Bonds, the "amount of Annual Debt Service" shall be maximum Annual Debt Service" shall be average Annual Debt Service; and

(iii) for all other Junior Lien Bonds for which a Reserve Account is established, the "amount of Annual Debt Service" shall be the amount set forth in the Supplemental Action establishing such Reserve Account, and it no amount is set forth, the "amount of Annual Debt Service" shall be average Annual Debt Service sha

amount of Annual Debt Service shall be average Annual Debt Service.

"Revenues" means the revenues of the City from the System, shall be construed as defined in Section 3 of Act 94, and shall also include:

as defined in Section 3 of Act 94, and shall also include:

(ii) Hedge Receivables; and (ii) income earned and gain realized from the investment of amounts in the various funds, accounts and subseccurits established by this Ordinance other than the Construction Fund for any Fiscal Year earnings on the Construction Fund are not credited to the Receiving Fund.

"Secured Obligations" means all Securities, Ancillary Obligations and Ancillary Obligation Fees and Expenses.

"Securities" means all Senior Lien Bonds and all Junior Lien Bonds.

"Senior Celligations" means all Securities issued under this Ordinance that have a senior lien on Piedged Assets.

"Senior Colligations" means all Senior Lien Bonds and Ancillary Obligations in respect of Senior Lien Bonds and secured on parity therewith.

respect of Senior Lien Bonds and secured on parity therewith.

"Sinking Fund installment Requirement" means, with respect to a Priority of Term Securities and as of the first day of each month in a Fiscal Year, the amount of any Mandatory Redemption Requirements next coming due in such Fiscal Year, including any Mandatory Redemption Requirement due at the maturity of such Term Security less the amounts credited to such Mandatory Redemption Requirement as the result of partial redemptions or purchase of such Term Securities.

"SRF Junior Lien Bonds' means all Junior Lien Bonds issued for the purpose of providing improvements to the System under the State's Revolving Fund,

"Supplemental Action" means an Act of Council or a sale order or other document aigned by the Finance Director pursuant to an Act of Council, which shall be this Ordinance if the action of the Finance Director is herein authorized.

Ordinance if the action of the Finance Director is herein authorized.

"System" means the Sewage Disposal System of the City including all plants, works, instrumentalities and properties, used or useful, in whole or in part, in connection with the collection, interception, treatment and disposal of sewage, or the administration or management thereof, all as the same now, exist or are hereafter provided for, logether with all additions, extensions, repairs and improvements thereto hereafter acquired.

"Term Securities" means, with respect to Securities of a Priority, any maturity of such Securities of a Priority, any maturity of such Securities that has Mandetory Redemption Requirements.

"Transfer Agent" means, as to any particular Securities, the bank or banks selected by the Finance Director to perform the duties provided for the Transfer Agent with respect to such Securities.

Section 2, Definitions of Annual Debt Services.

Service.

(a) Definitions.

(1) "Annual Debt Service" means, for any Fiscal Year and with respect to indebtedness of any particular Priority, the amount of such indebtedness due in such Fiscal Year in accordance with their

such Fiscal Year in accordance with their respective terms.
(2) Unless limited by another Section of this Ordinance, "Indebtedness" means (without duplication):
(i) Principal of and interest on Securities Outstanding in any Fiscal Year for which the calculation is made;
(ii) Reimbursement Obligations; and
(iii) Hedge Termination Payments.
(3) Other terms are defined in the last subsection of this Section.
(b) Rules for Calculating Principal and Interest.
(1) Final Day of Fiscal Year, Principal of

(b) Huses for Calculating Principal and Interest.

(1) First Day of Fiscal Year. Principal of and interest on Securities coming due on the first day of a Fiscal Year shall be calculated as being due on the last day of the immediately preceding Fiscal Year.

(2) Assumed Pald. Principal of and interest on any Securities due in a Fiscal Year for which the calculation is made shall be assumed to have been paid when due.

(3) Due Dates. The due dates for any principal, interest or Redemption Requirements are the stated dates for the payment thereof and not in advance of such stated dates by reason of acceleration.

(4) Term Securities.

(6) Mandatory Redemption Requirements shall be treated as principal maturing on the respective dates that such Mandatory Redemption Requirements are due.

manufactury are due to the principal amount of a Term Security maturing in a Fiscal Year shall be reduced by the total of the Mandatory Redemption Requirements due in each Fiscal Year before the Fiscal Year of such

Fiscal Year before the Fiscal Year of such maturity.

(5) Tender Securities. Except for Excluded Tender Securities, each date on which Holders of such Tender Securities may tender or may be mandated to tender such Tender Securities shall constitute a maturity of the principal amount of such Tender Securities that could be tendered on such date with the giving of notice or the passage of time, or both.

(6) Interest.

(I) Interest due in any Fiscal Year shall be offset by the amount of capitalized interest or interest received by the City as "accrued Interest" available for the payment thereof.

(ii) Separate provision is made in this Section for determining the interest rate on:

(A) Variable Rate Securities, (B) Fixed Rate Securities converting to Variable Rate Securities

(c) Variable Rate Securities.
(1) Il Variable Rate Securities have been Outstanding for less than a full Fiscal year on the date of calculation, then the interest rate on such Variable Rate Securities shall be calculated as 125% of the average of the Bond Market Association (BMA) Municipal Index for the five year period ending not more than one week before the date of such calculation.

week before the date of such calculation.

(2) If Variable Rate Securities have been Outstanding for one or more full fiscal Years on the date of calculation, then the interest rate on such Variable Rate Securities shall be calculated as 125% of the annualized average daily rate borne by such Varlable Rete Securities for the 12 calendar month ending immediate-

the 12 calendar month ending immediately before the month of calculation.

(3) Notwithstanding paragraphs (1) and (2), for the purpose of determining the Reserve Requirement for a Priority of Socurities, the interest rate on Variable Rate Securities shall be not adjusted after the date of Initial Issuance.

(d) Fixed Rate Securities. Convertible to Variable Rate Securities.

If Securities are issued as Fixed Rate Securities but are intended to convert by their terms to Variable Rate Securities during a future Fiscal Year and a calculation is made for such future Fiscal Year or any Fiscal year therealter, then the Fiscal Year or the such Securities are Outstanding for the purpose of calculating interest at a variable rate. variable rate

variable rate,
(e) Other Definitions.

\*\*BMA Material Index\*\* means the index based upon the weekly interest rates of tax-exempt variable rate issues included in a database maintained by Municipal Market Data, Boston, Massachusetts, a Thompson Financial Services Company (or its successor), which meet specific crieria established by The Bond Market Association.

teria established by The Borid Market Association.

"Counterpart Securities" means Securities that bear interest at rates which vary inversely to each other and that were issued contemporaneously with each other in order to produce a single fixed rate. In order to constitute "Counterpart Securities", both counterparts must be Outstanding at the same time.

"Excluded Tender Securities" means:
(i) Tender Securities that the Chy is not obligated to purchase under any circumstances upon the fallure of the remarketing thereof and for which the Chy has not provided a Liquidity Facility, and

(ii) Tender Securities for which the City has provided a Liquidity Facility.

"Fixed Rate Security" means a Security that bears interest at a rate that has been fixed for at least a five-year period that includes all of the Fiscal Year for which a calculation of Annual Debt Service is made.

calculation of Annual Debt Service is made.

(i) If the Fiscal Year for which a calculation of Annual Debt Service is made includes only a portion of such five year period, a Security is also a "Fixed Flate Security but only for such portion.

(ii) A rate is fixed for purposes of determining whether a Security is a "Fixed Rate Security" if the economic effect of a Security bearing interest at a fixed rate is produced by a Qualified Hedge or by Counterpart Securities.

(iii) A rate is not fixed for purposes of determining whether a Security is a "Fixed Rate Security" if the economic effect of a Security bearing interest at a variable rate is produced by a Qualified Hedge.

"Qualified Hedge" means a Hedge with a counterparty that is rated directly or indirectly by a Rating Agency in a rating category at least equal to the category in which the aubject Securities are rated without benefit of Credit Enhancement and without reference to qualifications such as "fulls" or "minus". and without reference to qualifications such as "plus" or "minus". If the subject Securities are not rated without the benefit of Credit Enhancement, then the rating category of such Securities shall be the rating category with the benefit of Credit Enhancement.

Enhancement.

Tender Securities" means Securities that are subject to optional or mandatory tender for purchase.

Variable Rate Security" means any Security hat is not a Fixed Rate Security. Section 3. Authorization and Issuance of Securities; Related Matters. (a) Authorization of Securities. Securities shall be authorized from time to time by Acts of Council and Supplemental Actions.

(a) Autroressum
Securities shall be suthorized from time to time by Acts of Council and Supplemental Actions.

(b) Issuing Securities. The Finance Director may, by Supplemental Action, take such actions as are necessary or appropriate to give effect to the transactions contemplated by an Act of Council authorizing the issuance of Securities or as are incidental thereto.

(c) Liability Limited. All covenants, agreements and obligations of the City contained in this Ordinance or in any Secured Obligations are those of the City and not of any member, officer or employee of the City his or her individual capacity, and no recourse shall be had for the payment of any Secured Obligations or for any claims based thereon or hereunder against any member, officer or employee of the City in this or her individual payment of any Secured Obligations.

(d) Execution, Authentication and Delivery of Securities and the Finance Director and shall have a facsimile of the City's seal impressed, imprinted or otherwise reproduced thereon.

(2) No Security shall be valid until authenticated by an authorized representative of the Transfer Agent. Securities shall be delivered by the City to the Transfer Agent by the Finance Director or designee for delivery to the purchaser(s) in accordance with instructions from the Finance Director upon payment of the purchase price therefor in accordance with the bid or purchase or the seal, from time to time as necessary, be delivered to the Transfer Agent for safekeeping.

(e) Reserve Account Requirement. Concurrently with the lasquance of

series ana, from time to time as necessary, be delivered to the Transfer Agent for safekeeping.

(e) Reserve Account Requirement. Concurrently with the issuance of Securities of a Priority for which a Reserve Account has been or is being established, there shall be credited to such Reserve Account the amount on deposit therein or credited thereto, equals the Reserve Requirement for Securities then to be issued and all Securities of such Priority then Outstanding, Such amount may be provided from any source or may be provided by a Financial Facility meeting the requirements of Securities the top the requirements of Section 4.

(f) Disposition of Proceeds. The proceeds of the sale of an issue of Securities shall be applied as follows:

(f) An amount equal to the accrued interest if any, shall be credited to the interest and Redemption Fund for such Securities to be applied to next maturing interest thereon.

Securities to be applied to next maturing interest thereon.

(2) If a Reserve Account has been or is being established for same Priority of being established for same Priority of Securities as such Securities, the amount necessary to comply with subsection (e) unless such compliance will be obtained with amounts from a different source.

(3) The balance of the proceeds shall be applied as provided in the Supplemental Action providing for the issuance of such Securities.

(3) Transfer of Registration of Securities.

(1) Maintenance—of Books. Each Transfer Agent shall keep or cause to be tapf, at its principal office, sufficient books for the registration and transfer of registration of Securities for which it is Transfer Agent (the Tregistry), which shall at all times be open to inspection by the City.

(2) Privilege of Transfer, Under such reasonable regulations as the Transfer Agent may prescribe, the registration of Securities for which it is the Transfer Agent may be transferred upon its Registry by the Person in whose name such Securities are registered, in person or by his or her duly authorized attorney, upon surrender of such Securities for carcellation, accompanied by delivery of a duly executed written instrument of transfer in a form approved by the Transfer Agent for such Securities.

(3) Surrender for Transfer, Receipt of New Securities. Whenever any Security is surrendered for transfer, the City shall surrenticate and deliver a new Security or Securities, in the same aggregate principal amount, of the same majurity, and bearing the same rate or rates of interest and otherwise of the same tenor as the Security surrendered for transfer.

(4) Transfer Taxes and Governmental

rates of interest and otherwise of the same tenor as the Security surrendered for transfer.

(4) Transfer Taxes and Governmental Charpes. The Transfer Agent shall require payment by the Holder requesting the transfer of any Security for which it is the Transfer Agent, any tax or other governmental charpe required to be paid with respect to such transfer.

(5) Limitations. Except as otherwise provided by Supplemental Action, a Transfer Agent shall not be required (f) to issue, register the transfer of or exchange Securities for which it is the Transfer Agent during a period beginning at the opening of business 15 days before the day of the giving of a notice of redemption or mandatory tender of such Securities selected for redemption or mandatory tender of such Securities selected for redemption or mandatory tender of such Securities of any such Security so selected for redemption or transfer of or exchange of any such Security so selected for redemption or transfer in whole or in part, except the unredeemed or untendered portion of such Security being redeemed or tendered in part.

(1) Mutiliated, Lost or Stolen Securities.

(1) If any Security is mutiliated, the City,

or tendered in part.

(ii) Mutilisted, Lost or Stolen Securities.

(ii) If any Security is mutitated, the City, at the expense of the Holder of the Security, shall execute, and the Transfer Agent for such Security shall authenticate and deliver, a new Security shall authenticate and deliver, a new Security of like tenor in exchange and substitution for the mutilisted Security, upon surrender to such Transfer Agent of the mutilisted Security.

(2) If any Security six lost, destroyed or stolen, evidence of ownership of the Security and of the loes, destruction or thefit may be submitted to the Transfer Agent for such Security and it this evidence is satisfactory to the City and the Transfer Agent, and, indemnity satisfactory to such Transfer Agent and indemnity satisfactory to such Transfer Agent and interchements of any applicable law, including Act 354, Public Acts of Michigan, 1972, as amended, have been met, then, at the expense of the Holder requesting the substitute Security, the City shall execute, and such Transfer Agent shall thereupon authenticate, and deliver, a new Security of like tenor and bearing the statement required by Act 354, or any applicable law here-after enacted, in lieu of and in substitution for the Security so lost, destroyed or stolen. If any such Security shall have matured or shall be about to mature, the Transfer Agent may pay the same without sumender thereof as authorized by Act 354 instead of issuing a substitute Security.

Security.
Section 4. Financial Facilities,

(a) The Finance Director may, from

time to lime and at any time, obtain a Financial Facility in respect of all or some Securities if the Finance Director deter-

Securities if the Finance Director determines such to be in the best financial interests of the City.

(b) The Finance Director may at any time require Credit Enhancement to fulfill the City's obligation to fund any Reserve' Account or substitute a Credit Enhancement for amounts in a Reserve Account. Before or concurrently with the acquisition of such Credit Enhancement, the Finance

of such Credit Ennancement, the Finance Director shall receive: (1) an opinion of nationally recognized bond counsel to the effect that such sub-stitution will not adversely affect the taxexempt status of interest on any

Securities;
(2) evidence that such Credit Enhancement is provided by a provider rated in the highest rating category of each Rating Agency then rating the Securities having the benefit of such Reserve

(3) a copy of the Credit Enhancement:

(3) a copy of the Credit Enhancement; and
(4) an opinion of counsel satisfactory to said nationally recognized bond counsel to the effect that the Credit Enhancement is valid and enforceable in accordance with list terms.
(c) The Finance Director may, in accordance with law, from time to time enter into such Hedges as the Finance Director determines to be in the best financial interests of the City.
(d) The Finance Director may grant to the provider of any Financial Facility, or to any counterparty to any Hedge authorized by this Section, such rights as may be necessary or appropriate that are not inconsistent with this Ordinance.
Section 5. Security for Payment.
(a) The payment of Secured Obligations is secured by a statutory lien, which is hereby created, upon the whole of the Piedged Assets subject to the use and application thereof in accordance with this Ordinance.
(b) The lien securing Hedge Obligations is valid only to the extent permitted by law.

(c) Except for Bond Insurance, a state-(c) Except for Bond Insurance, a state-ment of the Priority of an Ancillary Obligation shall be contained in the instru-ment evidencing or providing for such ancillary Obligation. (1) An Ancillary Obligation in respect of a particular Priority of Securities: (i) may be secured at a lower Priority, but

(ii) may not be secured at a higher Priority.

Priority.

(2) Ancillary Obligations are "related" to Securities of the same Priority for purposes of determining priority of security and payment even though such Ancillary Obligations may have been entered into in respect of a higher Priority of Securities.

(d) The lien securing the payment of a Secured Obligation is subject to the following Priorities:

(1) The lien securing Senior Obliga-

towing Priorities:

(1) The lien securing Senior Obliga-tions shall be a first lien, senior to all other liens created hereunder except the lien securing Ancillary Obligations Fees and

securing Ancillary Obligations Fees and Expenses.

(2) The lien securing Junior Obligations shall be junior only to the lien securing Senior Obligations whenever issued. Among Junior Obligations:

(1) the lien securing Second Lien Bonds and related Ancillary Obligations shall be senior to the liens securing all other Junior Obligations;

(ii) the lien of each other Priority of Junior Obligations shall be senior to the lien of all lower Priorities of Junior Obligations; and

Obligations: and

(III) the SRF Junior Lien Bonds shall be (iii) the art Junior Len Bonds small be the lowest Friority of Junior Lien Bonds, and the lien securing SRF Junior Lien Bonds and related Ancillary Secured Obligations shall be junior to the liens securing all other Junior Obligations, whenever issued.

securing an orner Juntor Congations, whenever issued.

(e) Each lien securing a Secured Obligation shall continue until either payment in full of such Secured Obligation or, in the case of Securities, is defeased as provided in this Ordinance.

Section 5. Payment of Secured Obligation; Subordination.

(a) Generally. Secured Obligations are not general obligations of the City and shall be payable solely from Pledged Assets as provided in this Section; (1) Anolliary Obligation Fees and Expenses are payable from Revenues and, to the extent of any insufficiency, Pledged Assets.

(2) All Securities and Anolliary Obligations are payable from Pledged Assets.

(3) All Securities and Anolliary Obligations are payable from Pledged Assets.

(1) Whenever any principal (and premium, if any) of and interest on Securities of a Priority or any payment on the Anolliary Obligations related to such Securities (any of the foregoing a Payment) is due and is not made when due, then until such Payment is made or provision made for the payment thereof the satisfaction of the Holders of such Securities and the obligees of such Anolliary Obligations, related to such Securities and Anolliary Obligations related to such Securities of lower Priorities (such Securities and Anolliary Obligations collectively, the "Subordinated Obligations" and the Holders and Obligations and the Subordinated Obligations and the Subordinated Obligations and Subordinated Obli

Subordinated Obligees\*, except as provided below with respect to defeased Securities.

(2) Subject to the payment in full of all Securities and Ancillary Obligations of every higher Priority (collectively, the Superior Obligations\* and the Holders and obligees thereof, the \*Superior Obligations\* and the Holders shall be subrogated to the rights of the Superior Obligees to receive payment in tut of the respective Obligations until amounts owing on the Subordinated Obligations shall be paid in full, and as between the City and its creditors, other than Superior Obligees and Subordinated Obligations which would otherwise have been made to Subordinated Obligations which would otherwise have been made to Subordinated Obligations which would otherwise have been made to Subordinated Obligations which would otherwise have been made to Subordinated Obligations which would otherwise have been made to Subordinated Obligations which would otherwise have been made to Subordinated Obligations which would otherwise have been made to Subordinated Obligations which would otherwise have been and and the Subordinated Obligations or the other hand.

(3) Except as otherwise provided in a Supplemental Action, the City may agree with the Holders of Securities of any related Ancillary Obligations or any security thereof, and any such Holders or obligees may release, sell exchange such security and otherwise deal freely with the City and the City with any of them, all without notice to or consent of the Holders or obligees.

(4) Nothing in this subsection shall impair the right of the Holders of any deleased Securities to be paid from the escrew effecting such defeasance.

(c) Financial Facilities. Except as otherwise provided in a Supplemental Action:

(1) Nothing in this Section shall affect the payment of Securities from any subsections shall affect the payment of Securities from any

Action:

Nothing in this Section shall affect the payment of Securities from any Financial Facility obtained for the benefit of such Securities.

(2) No payment of an amount made by a drawing or disbursement under a Financial Facility to Holders of Securities

which would atherwise have been made by the City shall be deemed to be a pay-ment by the City on account of such scourties for the payment of discharging the City's obligation on such Securities.

Section 7. Securityholders' Rights;

Receiver.
(a) The Holder or Holders of the (a) The Holder or Holders of the Securities representing in the aggregation to less than 20% of the entire principal amount thereof then Outstanding, may, by suit, action, mandamus or other proceedings, protect and enforce the statutory lien upon Pledged Assets, and may, by suit, action, mandamus or other proceedings, enforce and compel performance of all dulles of the officers of the Olly, including the futing of sufficient rates, the collection of Revenues, the proper segregation of the Revenues of the System and the proper spilication thereof. The statutory lien upon Pledged Assets, however, shall not be construed to compel the sale of the System or any part thereof.

not be construed to compel the sale of the System or any part thereof.

(b) if there is a default in the payment of the principal (and premium, if any) of and interest on any Securities, any countries, and premium, if any) of and interest on any proper action may appoint a receiver to administer and operate the System on behalf of the City and, under the direction of the court, perform all of the duties of the officers of the City more particularly set forth herein and in Act 94.

(c) The Holder or Holders of the Securities shall have all other rights and remedies given by Act 94 and by law for the payment and enforcement of the Securities and the security therefor.

Section 8. Management.

Sectimes and the security therefor.

Section 8. Management.

The operation, repair and management of the System, including all projects financed by the issuance of Securities, shall remain under the supervision and control of the Commissioners in the manner provided in Article 7. Chapter 5 of the Charter of the City subject to the rights, powers and duties in respect thereto which are reserved by law and the City Charter to the Council.

Section 9. Fixing and Revising Rates; Rate Coverants.

(a) The coverage requirements for determining the Required Combined Coverage under this Section are the to-lowing percentages:

Priority of Indebtedness
Senior Lien Indebtedness
Second Lien Indebtedness
SRF Junior Lien Bonds
Percentage
120
110
100

Prior to or concurrently with the issuance of a Priority of Securities not enumerated above, this subsection shall be amended to provide for the coverage percentage for Indebtedness in respect of such Priority of Securities, but in no case shall the coverage percentage be less than 100. Such amendment shall not require the consent of Holders of any Securities.

counties.

(b) The rates for sewage disposal service and the regulations shall be the rates and regulations required to be established by Act 94. Such rates shall be fixed and revised from time to time as may be expected to be necessary to produce the greater of:

(1) the amount

greater of:

(1) the amounts required:
(i) to provide for the payment of the expenses for maintenance of the System as are necessary to preserve the same in good repair and working order; and
(ii) to provide for the payment of indebtedness coming due for the Fiscal Year of calculation; and
(iii) to provide for the provide or the second or the second

(iii) to provide for the creation and maintenance of reserves therefor as required by the Ordinance or any ordinance or resolution adopted in accordance with the terms thereof and hereof.

dance with the terms thereor and hereor; and simple, and that dis(IV); to provide for such other expenditures and funds for the System as this Ordinance may require; and
(2) The Required Combined Coverage where the Inflows are the Net Revenues projected for the Fiscal Year of calculation and the Outflows are the Indebtedness coming for such Fiscal Year,

(c) The City hareby covenants and agrees at all times to fix and maintain such rates for services furnished by the System as shall be sufficient to provide for the foregoing and to repay any borrowing from the Extraordinary Repair and Replacement Reserve Fund.

(d) Without taking into account any transfers from the Rate Stabilization Fund, the City shall at all times observe and compty with the covenant contained in subsection (b)(2) above as if the Rate Coverage Percentage were 100.

(e) The charges for sewage disposal service which are under the provisions of Seetilon 21 of Act 94, Public Acts of Michigan, 1933, as amended, are mede a lien on all premises served thereby, unless notice is given that a tenant is responsible, are hereby recognized to constitute such lien and whenever any such charge against any place of property shall be delinquent for six months, the City official or officials in charge of the collection thereof may certify to the tax assessing officer of the City not later than April 1 of each year the fact of such delinquency, whereupon such charge shalls be intered upon the next tax roll as a charge spainst such premises and the lien thereof enforced in the same manner as general City taxes against such premises and the lien thereof enforced in the same manner as general City taxes against such premises and service as provided by sald Section 21, no further service shall be rendered to such premises until a cash deposit equal to the estimated amount of the next ensuing bill shall have been made as security for payment of such charges and service as provided by sald sections and service as provided by sald section 21, no further service shall be rendered to such premises until a cash deposit equal to the estimated amount of the next ensuing bill shall have been deformed to such premises until a cash deposit equal to the estimated amount of the next ensuing bill shall have been deformed as security for payment of such charges and service when the collection of sevage disposal rates when due.

premises for the nonpayment of sewage disposal rates when due.

Section 10. No Free Service or Use; Metered Service. No free service or use of the System, or service or use of the System at less than cost, shall be jumished by the System to cost, shall be turnished by the System to any person, firm or corporation, public or private, or to any public agency or instru-mentality, including the City and any other municipality. All service provided to cus-tomers of the System, with the exception of temporary connections and certain public service uses of the City which are billed on an estimated basis, shall be material.

Section 11. Operating and Fiscat

The System shall be operated on the basis of the Fiscal Year.

Section 12 Funds and Accounts;

- A. Establishment of Funds and Accounts.

- Accounts.

  (a) The following funds and accounts are hereby established:

   Sewage Disposal System Receiving Fund (the "Receiving Fund")

   Operation and Maintenance Fund

   Senior Lien Bond interest and Redemption Fund

   Senior Lien Bond Reserve Account

   Senior Lien Bond Reserve Account

   Senior Lien Bond Reserve Account
- Senior Lien Bond Interest and Redemption Fund
   Second Lien Bond Interest and
   Second Lien Both Service Account
   Second Lien Bond Reserve Account
   Such Interest and Redemption Funds
   are established by Supplemental
  Action for other Priorities of Junior Lien

- SRF Junior Lien Bond Interest and
- Redemption Fund
   SRF Junior Lien Debt Service Account

- Account

  No SRF Junior Lien Bond Reserve
  Account is established
  Extraordinary Repair and Replacement Reserve Fund
  Surplus Fund
  Surplus Fund
  (b) Additional funds may be established for other Priorities of Securities by Supplemental Action of the Finance Director.

Supplemental Director.

B. Flow of Funds.
All Revenues shall be set askde as collected and oredited to the Receiving Fund. As of the linst day of each month, amounts credited to the Receiving Fund shall be transferred seriatm into the following funds and accounts but only within be nationally and accounts but only within the respective limitations and only if the maximum amount within such limitation has been credited to the preceding hand

or account:
First: to the Operation and Maintenance Fund, a sum sufficient to provide for the payment of the next month's expenses of administration and operation of the System (including Ancillary Obligation Fees and Expenses) and such current expenses for the maintenance thereof as may be necessary to preserve the same in good repair and working order;
Second: to the Sentor Lien Bond Oebt Service Account, an amount that, when added to all other amounts then on deposit therein, shall equal the Debt Service installment Requirement for Sentor Lien Obligations as of the first day of such month;

deposit therein, shall equal the Debt Service installment Requirement for Senior Len Orbigations as of the first day of such month;

Third: to the Senior Lien Bond Reserve Account, an amount that when added to all other amounts then on deposit therein, equal the Reserve Requirement for Senior Lien Bonds;
Fourth: to the Interest and Redemption Fund established for each Priority of Junior Lien Bonds, beginning with the Second Lien Bonds and continuing in descending order of Priority to, and including the SRF Junior Lien Bonds:

First to the Debt Service Account established for such Priority, an amount that, when added to all other amounts then on deposit therein, shall equal the Debt Service Installment Requirement for Junior Orbigations of such Priority as of the first day of such month;

Second: to the Reserve Account, if any, established for such Priority and other amounts then on deposit therein, shall equal the Reserve Requirement for such Priority of Junior Lien Bonds;

Fifth: to the Extraordinary Repair and Replacement Reserve Fund, the amount of the Extraordinary Repair and Replacement Minimum Requirement and pursuant to Section 13D shall be deducted from the Extraordinary Repair and Replacement Maximum Requirement and Extension Fund, such amount, if any, that the Commissioners may deem advisable; provided that no amount shall be deposited therein or credited thereto to so long as a borrowing from the Extraordinary Repair and Extension Fund, such amount, if any, that the Commissioners may deem advisable; provided that no amount shall be deposited therein or credited thereto to so long as a borrowing from the Extraordinary Repair and Extension Fund, such amount, if any, that the Commissioners may deem advisable; provided that no amount shall be deposited therein or credited thereto to so long as a borrowing from the Extraordinary Repair and Replacement Reserve Fund remains unpaid:

A. Receiving Fund.

(a) Amounts in the Receiving Fund shall be morthly applied as provided in Section 12.

(b) Amounts remaining in the Receiving Fund as of the last day of each Fiscal Year shall be credited in its Surplus

B. Operation and Maintenance Fund.

B. Operation and Maintenance Fund.
Amount in the Operation and Maintenance Fund shall be used to pay the expense of administration and operation of the Sulfem (including Ancillary Obligation Fees, and Expenses and any rebales to the United States government that may be required by the Code and such current expenses for the maintenance thereof as may be necessary to preserve the attme in good repair and working order.

C. Interest and Redemption Funds.
(a) Generally, Amounts in the Interest and Redemption, Fund established for a Priority of Securities and Ancillary Obligations shall be applied to pay principal (and redemption premium, if any) of and interest on, such Priority of Ancillary Obligations.

(b) Mandatory, Redemption Requirements.

(c) Amandatory Redemption Requirements.

(b) Mandatory Redemption Requirements.

(1) A Mandatory Redemption Requirement for a maturity of Term Securities may be satisfied in whole or in part by the redemption of Term Securities of such maturity or by the purchase and surrender to the Transfer Agent of such Term Securities from amounts credited to the interest and Regemption Fund established for such Prior of Securities or purchased with other funds legally available therefor. The Finance Director shall elect the manner in which he/be intends to satisfy all or a portion of a Mandatory Redemption Requirement for particular Term Securities not less than 40 days prior to the due date of such Mandatory Redemption Requirement unless otherwise provided legitles Supplemental Action providing for tips (sauance of auch Term Securities.

Redemption Regularment unless otherwise provided (e) the Supplemental Action providing for the insurance of such Term Securities. 114

(2) Unless otherwise provided in a Supplemental Action providing for the Issuance of Torey Securities, the City will receive a credit against the Mandatory Redemption Requirement for Term Securities for which such Mandatory Redemption Requirement was established that have been redeemed (other than by application of Mandatory Redemption Requirements) or otherwise acquired by the City prior to the giving of the notice of redemption and that have not been applied as a credit against any other Mandatory Redemption Requirements.

(i) Not less than 40 days prior to any mandatory redemption date for Term Securities, the Finance Director shall give notice to the Transfer Agent that such Term Securities are to be so credited.

(ii) Each such Term Security shall be credited by the Tiransfer Agent at 100% of the principal amount thereof against the Mandatory Redemption Requirement, and the principal amount of Term Securities to be redeemed on such mandatory redemption Requirement, and the principal amount date shall be reduced accordingly and any excess over such amount shall be credited to the Receiving Fund.

(c) Reserve Accounts.

(1) Except as otherwise provided herein, amounts in a Reserve Account shall be used solely for the payment of the principal (and premium, it any) of any interest on Securities and Ancillary Obligations of the Priority for which such Reserve Account the amount of such excess may be transferred therefrom and credited to the Receiving Fund.

(2) If at any time the amount on deposit in or credited to a Reserve Account saceads the Reserve Requirement for such Reserve Account, the amount of such excess may be transferred therefrom and credited to the Receiving Fund.

(3) No turther payments need be made into an interest and Redemption Fund in respect of principal and interest after enough of the Securities for which such Fund was established have been retired so that the amount then held in auch Fund, including the Reserve Account therein, if any, is equal to the entire amount of principal and interest which will be payable at the time of maturity of all the then Outstanding Securities of such Priority.

(4) A separate Reserve Account may be established for an Issue of Securities by the Supplemental Action providing for the Issuance of auch Securities.

(I) Securities having the benefit of euch Reserve Account may be issued but only if such separate Reserve Account is fully equal to the Reserve Requirement for such Securities.

(II) The amounts to be paid into any

Issuance of such Securities.

(ii) The amounts to be paid into any separate Reserve Account to restore it to its Reserve Requirement shall be made on a parity with payments into all other Reserve Accounts established for the same Priority of Securities and shall not exceed, in any Fiscal Year, its proportionate delicit payment. "Proportionate Deficit Payment" means for a separate Reserve Account the same proportion that the amount available to remedy deficits in each Reserve Account for such Priority bears to the aggregate deficit in all Reserve Accounts for such Priority.

D. Extraordinary Repair and Re-

D. Extraordinary Repair and Re-piacement Reserve Fund.

(a) Amounts may be used to pay the costs of making major unanticipated repairs and replacements to the System which individually have cost or are reasonably expected to cost in excess of \$1,000,000 as determined by the

\$1,000,000 as determined by the Commissioners.

(b) On and after the first day of each Fiscal Year, the Finance Director may, by Supplemental Action, transfer to the Improvement and Extension Fund not more than 50% in aggregate of the balance in this Fund on the first day of such Fiscal year if, but only if (i) in the month of such transfer the full amount of the Extraordinary Repair and Replacement Minimum Requirement for each prior month in the current Fiscal Year has been credited to this Fund and (ii) the amounts of all prior transfers from this Fund to the Improvement and Extension Fund have Improvement and Extension Fund have been restored in full.

E. Improvement and Extension

The improvement and Extension Fund shall be used for improvements, enlargements, extensions or betterment to the System

System.

F. Surplus Fund.
Amounts from time to time on hand in the Surplus Fund may, at the option of the Commissioners, be used and applied for any purposes related to the System; provided, however, that if and whenever there should be any deflict in the Operation and Maintenance Fund or in any Interest and Redemption Fund (including any Reserve Account therein) then transfers shall be made from the Surplus Fund to such funds in the priority and order named in Section 12 to the extent of any such deficit.

Section 14. Construction Fund.

Section 14. Construction Fund.

(a) There shall be established and meinialmed a separate depository fund designated the Construction Fund. The City may designate separate accounts in the Construction Fund for different series of Construction Fund for different series of Construction Fund for different series. and Constructor Fund for different series of Securities for administrative purposes and to better enable the City to comply with its tax covenants in Supplemental Actions or recolutions regarding the exclusion from lederal income taxation of integral on Sagwither their non-taxation of integral on Sagwither their non-taxation.

(b) Amounts in the Construction Fund shall be applied solely in payment of the cost of repairs, extensions, enlargements, cost of repairs, extensions, enlargements, and improvements to the System (\*construction costs\*) and any costs of engineering, legal, bond insurance premiums, if any, and other expenses incident thereto, to the financing thereof.

(1) Payments of construction costs,

(1) Payments of construction costs, either on account or otherwise, shall not be made unless the registered engineer in charge of such work shall file with the commissioners a signed statement to the affect that the work has been completed in accordance with the plans and specifications therefor; that it was done pursuant to and in accordance with the contract to and in accordance with the contract. therefor; that such work is sallstactory; and that such work has not been previously pald for.

Interest; user sour work as a securatory, and that such work has not been previously paid for.

(2) Payment of the cost of engineering, legal, financial, bond insurance premium, etc., as provided in this section shall be made upon submission of appropriate documentation to the Finance Director.

(c) Any unexpended balance remaining in the Construction Fund may in the discretion of the Commissioners be used for meeting any Reserve Requirement or for further improvements, enlargements and extensions to the System III, at the time of such expenditure, such use is approved by the Michigan Department of Treasury Municipal Finance Division, if such permission is then required by law. Any remaining balance after such expenditure shall be paid into the interest and Redemption Fund established for the Priority of Securities giving rise to such balance for the purpose of purchasing Securities of such Priority all not more than the fair market value thereof but not more than the fair market value thereof but not more than the fair market value thereof but not more than the fair market of called for redemplion or used for the purpose of calling such Securities to redemplion. The City may provide additional or different lawful uses lot such unexpended balance or remaining balance by Supplemental Action of the Finance Director which shall, nonetheless, be subject to the City's relevant tax covenants.

vani tax covenants.

Section 15, Rate Stabilization Fund.
(a) As used in this Section, "Prior Revenue" means any amounts that constitute Revenues or Net Revenues and held under this Ordinance but only to the extent that such amounts may be applied to any lawful purpose of the System. "Prior Revenue" does not include any amounts held under this Ordinance that at the time are restricted in application to a specific purposes, such as, by way of illustration, the application of amounts in the Surplus Fund in the event of a deficit as provided in the provision to Section 13(F).

(b) The Commissioners may create a

13(F).

(b) The Commissioners may create a fund designated Sewage Disposal System Rate Stabilization Fund (the Mate Stabilization Fund). No amounts shall be deposited therein or credited thereto except Prior Revenues and then only it:

(1) such Prior Revenue is credited to the Rate Stabilization Fund in the Fiscal

the Rate Stabilization Fund in the Fiscal Year in which it was recognized by the City as Net Revenue or within 90 days after the end of such Fiscal Year;

(2) the amount of such Fiscal Year;

(2) the amount of such Fiscal Year for all purposes of this Ordinance; and

(3) the amount of Net Revenue recognized in such Fiscal Year at least meets the minimum applicable coverage requirements of this Ordinance for such Fiscal Year at least meets the deduction and (ii) all prior deductions in respect of such Fiscal Year pursuant to this clause.

rear pursuant to this clause.

(c) Amounts on deposit in the Rate
Stabilization Fund may be taken into
account for purposes of fixing and revising rates and rate covenants with respect
to Sacurities (any euch purposes, a
"Coverage Determination").

(d) Whenever any amount on deposit in the Rate Stabilization Fund is taken into an the Hate Stabilization Fund is taken into account for any Coverage Determination (a "Reserved Amount"), then such Reserved Amount shall be credited to the Receiving Fund for the Fiscal Year for which such Coverage Determination is

made.

(e) Prior to the transfer of any Reserved Amount to the Receiving Fund, such Reserved Amount shall not be used or applied to any purpose except pursuant to Section 17 and then only after all other amounts then in the Rate Stabilization Fund have been applied pursuant to Section 17. Section 17.

(f) Amounts on deposit in the Rate Stabilization Fund other than Reserved Amounts may be applied to any lawful purpose of the System.

purpose of the System.

Section 16. Depositaries.

(a) Amounts in the several funds, accounts and subaccounts established pursuant to this Ordinance shall be kept in one or more accounts departed and apart from all other accounts of the City, and kept in only one accounts of the City and the manner and at the times provided in this Ordinance.

(b) Amounts in the interest and

this Ordinance.

(b) Amounts in the interest and Redemption Fund for a Priority of Securities shall be kept on deposit with one of the banks or trust companies where the principal of and interest on such Priority of Securities are payable.

(c) The depositary of all funds and accounts, except as otherwise specifically provided for herein, shall be those banks or trust companies designated from time to time as such by the Finance Director.

provided for herein, strat be those barner by the companies designated from time to time as such by the Finance Director.

Section 17. Priority of Funds.

(a) if amounts in the Receiving Fund are insufficient to provide for the current requirements of the Operation and Maintenance Fund and each interest and Redemption Fund (including the Reserve Account, if any, therein), then any amounts or securities held in the Supplus Fund, the improvement and Extension Fund and the Extraordinary Repair and Replacement Reserve Fund shall be credited or transferred, first, to the Operation and Maintenance Fund shall be credited or transferred, first, to the Operation and Maintenance Fund shall be credited or transferred, first, to the Operation and Maintenance Fund shall be credited or transferred, first, to the Operation and Maintenance Fund shall be credited or transferred, first, to the Operation and Maintenance Fund shall be credited or transferred, first, to the Operation and Maintenance Fund shall be credited or transferred, first, to the Operation of Maintenance Fund shall be credited or transferred, first, to the Operation and Maintenance Fund shall be credited or transferred, first, to the Operation of Maintenance Fund shall be credited, to the operation of the extent of the instruction of the instruction of the operation of the interest and Redemption of otherwise), and there are insufficient amounts to the applied to such payment amounts in each interest and Redemption Account established for each lower Priority of Securities, beginning with the lowest Priority and proceeding serialin in assending order of Priority, until such payments are made in full.

Section 18. Investments. The Permitted Investments.

Section 18. Investments.

(a) Permitted Investments. The Permitted Investments for amounts held under this Ordinance are the Legal investments for such amounts subject to

Investments for such amounts subject to the following:

(1) Investment of amounts in any Reserve Account shall be limited to oblig-ations bearing maturity dates or subject to redemption, at the option of the Holder thereof, not later than ten years from the data of the investment.

thereof, not later than ten years from the date of the investment.

(2) Except as otherwise herein provided, kinwestnents estall inative of such ilmes as it is estimated therefrom will be required, but shall be limited to obligations bearing maturity dates or subject to redemption, at the option of the Holder thereof, not later than five years from the date of investments. date of investments.

(3) A Supplemental Action may pro-vide for limitations in addition to or in lieu of the above limitations on Legal Investments or may eliminate any of such

imitations.

(4) Notwithstanding paragraph (3), no Permitted investments for the detessance of particular Securities may be changed without confirmation from each Reling

Permitted investments for the cereasence of particular Securities may be changed without confirmation from each Reling Agency that such change will not reduce the rating of such Securities.

(b) Where Held. To the extent required by Act 94, securities representing investments made under this Ordinance shall be kept on deposit with the bank or trust company having on deposit the fund or funds or accounts from which the purchase was made.

(c) Disposition of Profit and Gain.

(1) Profit realized or interest income earned on investment of amounts in the Receiving Fund, Operation and Maintenance Fund, any Interest and Redemption Fund (including the Reserve Account, if any, therein), the Extraordinary Repair and Replacement Reserve Fund, and Improvement and Extension Fund shall be credited to the Receiving Fund.

(2) Profit realized or interest samed on investments of funds in the Construction Fund relating to any series of Securities and any Reserve Account or Subaccount established for any Securities) shall be credited as received to the funds from which such investments were made; provided, however, that profit realized or interest earned on the Construction Fund relating to any series of Securities may, if permitted by law, be credited to the Receiving Fund at the option of the Commissioners.

(d) Valuation.

Receiving Fund at the option of the Commissioners.
(d) Valuation.
(1) Investments credited to any Reserve Account shall be valued at least annually on each January 1, unless otherwise specified in the Supplemental Action providing for the issuance of such Securities, at the market value thereof, and the City shall withdraw any excess immediately and, in the event of a deficit, budget auch additional deposits at the beginning of the next succeeding Fiscal Year in an amount necessary to maintain each Reserve Account et its Reserve Regularment. Requirement.

(2) Investments in the Extraordinary Repair and Replacement Reserve Fund shall be valued at least annually on each July 1 at the cost thereof.

July 1 at the cost thereof.

Section 19. Covenants.

The City covenants and represents with the Holders of all Securities from time to time Outstanding as follows.

(a) Ownership and Authority. The City is the tawful owner of the System; the System is free from any and all liens and encumbrances; and the City has good right and tawful authority to encumber and pledge the Piedged Assets as herein encumbered and pledged.

(b) Maintenance and Operation of System.

(1) Meintenance and operation or System.

(1) The City will, through its Commissioners, or such successor board or body as may hereafter be legally charged with the duty of the operation of the System, maintain the System in good repair and working order.

(2) The City will from time to time make all needful and proper repairs, replacements, additions, and betterments to the System so that the System may at all times be operated properly and advantageously, and whenever any portion of the System shall have been worn out, destroyed or become obsolete, inefficient or otherwise until for use, the City will procure and install substitutes of at least

equal utility and efficiency so that the value and efficiency of the System shall all all times be fully maintained.

(c) Books and Records. The City will maintain and keep proper books of record and account separate from all other records and account in which shall be made full and correct entries of all transactions relating to the System, and the City will also cause an annual audit of such books and records for the preceding Fiscal Year. The City will make such audit available to the Holder of any Security upon request.

available to the Prober of any Security upon request.

(d) Disposition of System. The City will not sell, lease or dispose of the System or any substantial part thereof until all Outstanding Securities have been paid in full as to both principal and interest.

paid in full as to both principal and interest.

(1) This covenant shall not be construed to prohibit the disposition or lease of any property comprising part of the System which is no longer necessary, appropriate, required for the use of, or profitable to the System, or which is no longer necessary to the property operation and maintanance thereof, or which may be sold and leased back to the extend such arrangement is permitted by law.

(2) Paragraph (1) shall not be construed to authorize or permit the sale, clease or disposition of any substantial part of the System.

(3) The City may at all times in its discretion after, repair or replace any buildings or structures or any part of the System and appurtenances thereto as the Commissioners determine necessary for

Commissioners determine necessary for

the system.

(e) No Competition. The City will not, and will not to the extent permitted by law, permit others to, operate a sewage disposal system that will compete with the

System.

(f) Tax Exemption of Securities. The City will take all action and refrain from any action as is necessary, including paying any rebates to the United States government that may be required by the Code so as not to impair the tax exemption of the interest on Securities issued as tax-exempt Securities from general fed-eral and State of Michigan income taxa-

don't first it deposits at the experiments of the interest on Securifies assured as backers and State of Michigan income taxation and State on the Securifies and the property of the State of Michigan income taxation and the securities and to perform such other duffice as may be provided in a Supplemental Action, provided that no castion states without its consumer.

(b) All fees, costs, and expenses of any legal proceedings that may be prought by the State of any legal proceedings that may be prought by the State of the Securities and the securities and the peak by the City to the Tiustee or such costs and expenses that be peak by the City to the Tiustee or such costs and expenses and be peak by the City to the Tiustee or such costs and expenses and be peak by the City to the Tiustee or such costs and expenses and be peak by the City to the Tiustee or such costs and expenses and be peak by the City to the Tiustee or such costs and expenses and the peak by the City to the Tiustee or such costs and expenses and the peak by the City to the Tiustee or such costs and expenses that the peak by the City to the Tiustee or such costs and expenses the costs and expenses the costs and expenses that the peak by the City to the Tiustee or such costs and expenses the City shall be reinboursed, to the extent that sufficient smouths are costs and expenses the costs and expenses the City shall be reinboursed, to the extent that sufficient smouths are costs ano

(e) In the event the required percentage of Securityholders shall direct the Trustes in writing to exercise one or more of the remedies specified in this Ordinance or in Act 94, the Trustes shall be under no obligation to proceed to enforce or compel the performance of the duties and obligations of the City under this Ordinance unless and untill the Holders shall have reasonably indemnified the Trustee for all estimated costs and expenses in the exercise of said remedies, including necessary attorneys' sees.

Section 21. Additional Securities.

cles, including necessary attorneys fees.

Section 21. Additional Securities.

A. Limitations on indebtedness.

The City shall not incur any obligations payable from Pledged Assets except for Secured Obligations, and no obligations of the City shall be secured by a lien on Pledged Assets except as provided in the Ordinance.

Ordinance.

8. Issuance of Securities.

(a) Limitations on Issuance.

(i) The City shall not issue any Securities except in accordance with Section 21. Ancillary Obligations and Expenses may be incurred in respect of such Securities and shall be secured and Dayable as elsewhere provided in this Ordinance.

(2) Other landations on the issuance of

Ordinance.

(2) Other limitations on the issuance of Securities may be added by Supplemental Action of the Finance Director.

(b) Coverage Requirements. The coverage requirements for determining the Required Combined Coverage under this Section are the following percentage:

Priority of Indebtedness Percentage Senior Lien Indebtedness Second Lien Indebtedness SRF Junior Lien Bonds

110 100

SRF Junior Lien Bonds

Prior to or concurrently with the seanne of a Priority of Beourfiles not enumerated above, this subsection shall be amended to provide for the coverage percentage for such Priority of Securities, but in no case shall such coverage percentage be less than 100. Such amendment shall not require the consent of Holders of any Securities.

(c) Refunding Securities. If any Additional Securities (any of such, the Refunding Securities) are to be issued to refund Outstanding Securities (the "Securities to be Refunded"), the Annual bett Service to be used for determining the Required Combined Coverage shall be the Annual Debt Service on the Securities to be Refunded").

Elementage Combined Coverage shall be the Annual Debt Service on the Securities to be Refunded.

C. "New Money" and Refunding.

Securities, If, but only If, there is Required Combined Coverage under either the Projected Net Revenues Test contained in subsection (b) or the Historical Net Revenues Test contained in subsection (o). The determination in a Supplemental Action that there will be Required Combined Coverage upon the Issuance of such Additional Securities shall be conclusive.

clusive.

(b) Projected Net Revenues Test. For purposes of determining the Required Coverage Requirement, the Inflows are the projected Net Revenues of the System for the then current or the next succeeding Fiscal Year and the Outflows are the maximum composite Annual Debt Service in any Fiscal Year on Outstanding Securities and the Additional Securities to be incredible.

be issued.

(1) Projected Net Revenues may include 100% of the estimated increase in Net Revenues to accrue as a result of the acquisition of the repairs, extensions, enlargements and improvements to the System to be pald for in whole or in part from the proceeds of the Additional Securities.

Securities.

(2) In projecting Net Revenues, the City shall engage the services of and be guided by a consultant of national reputation for advising municipalities with respect to setting rates and changing for the use of sewage disposal systems.

(c) Historical Net Revenues Test. For

the use of sewage disposal systems.

(c) Historical Net Revenues Test. For purposes of determining the Required Coverage Requirement, the Inflows are the actual Net Revenues of the System for the immediately preceding audited Fiscal Year and the Outflows are the maximum composite Annual Debt Service in any future fiscal Year on Outstanding Securities and the Additional Securities to be issued.

(1) Instead of the immediately preceding audited Fiscal Year, the City may use any audited Fiscal Year, the City may use any audited Fiscal Year, the City may use than staten months prior to the date of delivery of such Additional Securities.

(2) If any change in the rates, lees and charges of the System has been authorized at or prior to the date of sale of such Additional Securities, the Net Revenues for the particular preceding Fiscal Year shall be augmented by an amount reflecting the effect of such change had the System's billings during such Fiscal Year been at the increased rates.

(3) Net Revenues for the particular recording subtless the Year bear and the particular recording subtless the Year bear and the Increased rates.

System's billings during such Fiscal Year been at the increased rates.

(3) Nel Revenues for the particular preceding audited Fiscal Year also may be augmented by 100% of the estimated increase in Nel Revenues to accrue as a result of the acquisition of the repairs, extensions, enlargements and improvements to the System to be paid for in whole or in part from the proceeds of such Additional Securities 100% of any acquisition, extension or connection which was made subsequent to the end of the particular proceding audited Fiscal Year.

(4) With respect to augmentation of Nel Revenues, the City shall engage the services of and receive the certificate of a consultant of national reputation for advising municipalities with respect to setting rates and charges for the use of sewage disposal systems regarding the edistence of such conditions.

(5) Audited financial statements may

(5) Audited financial statements may be relied upon if no augmentation of Net Revenues is required.

Revenues is required.

D. Debt Service Reduction — An Additional Means of Refunding.

The City may issue Securities of any Priority (herein, "Additional Securities") without regard to Section 21C for refunding all or part of Securities then Outstanding and paying costs of issuing the Refunding Securities, including deposits which may be made to any Reserve Account established or to be established for such Additional Securities or eny other Securities if, but only ##."

(1) the combined Annual Debt Service coming due in the current Fiscal Year and

coming due in the current Fiscal Year and each Fiscal Year thereafter until maturity on (A) the Additional Securities and (B) giving effect to the refunding, all Outstanding unrefunded Securities of equal and higher Priority is less than (2) the combined Annual Debt Service

coming due in the current Fiscal Year and each Fiscal Year thereafter until maturity on all equal and higher Priority Securities, without giving effect to the refunding.

Section 22. Defeasance (a) A Security is "defeased" for pur-oses of this Ordinance it:

poses of this Ordinance It:

(1) there has been deposited in trust sufficient cash and Permitted Investments, not callable by the issuer, the principal of and interest on which mature at the times and in the amounts, without the reinvestment ittereof, necessary to pay principal of and interest on such Security to its maturity, or, it called for redemption, to the date fixed for redemption, together with the amount of the redemption premiting it any and

to the date fixed for redemption, together with the amount of the redemption premium, if any; and

(2) if such Security is to be redeemed prior to maturity, inevocable instructions have been given to the Transfer Agent to call such Security for redemption.

(b) A Supplemental Action providing for the issuance of Securities may;

(1) provide different means of deleasing such Securities, and such means may be in addition to or in lieu of the means set forth in subsection (a);

(2) provide for the Legal investments that are Permitted investments for the deleasance of such Securities, but no such Permitted investments may thereafter be changed except as provided in Section 18; and

(3) provide for the consequences of such Securities being deleased.

(c) Except as otherwise provided in a Supplemental Action:

(1) the Legal investments for the defeasance of such Securities are the Permitted Investments therefor; and

(2) the statutory lien herein referred to in Section 4 shall be terminated with respect to defeased Securities, the Holders of such defeased Securities that have no further rights under this Ordinance except for payment from the deposited funds and registration and replacement of such Securities, and such Securities, shall have no further rights under this Ordinance suces of such Securities, and such Securities, shall not longer be considered to be Outstanding under this Ordinance.

Section 23. Amendments; Consent of Securityholders.

Section 23. Amendments; Consent of Securityholders.

of Security/noisers.
A. Amendment without Consent.
(a) This Ordinance may be amended or supplemented from time to time by Act of Council or Supplemental Action without consent of the Holders of Securities:

consent of the Holders of Securities:

(1) To leave Securities of any Priority;

(2) To add to the covenants and agreements of the City in this Ordinance contented, other covenants and agreements thereafter to be observed or to surrender, restrict or limit any right or power reserved to or conterned upon the City (including but not limited to the right to issue Securities or Incur other Secured Obligations of, in either case, any Priority):

Obligations or, at states
Priority);
(3) To make such provisions for the
purpose of curing any ambiguity, or curing, correcting or supplementing any
defective provisions contained in this
Ordinance, or in regard to matters or
questions arising under this Ordinance,
as the City may deem necessary or desirable:

able; (4) To increase the size or scope of the

(4) To increase the size or scope or the System; and
(5) To amend or supplement this Ordinance in any respect with regard to one or more Priorities of Securities so long as such amendment does not materially adversely affect the Holders of Outstanding Securities.
(b) No Holders of a Priority of Securities shall be "materially adversely

affected" for the purposes of this Ordinance by the change of any coverage percentage established tor any other Priority of Securities, and no amendment of or supplement to this Ordinance that provides for or tacilitates the leasures of Securities or Incurs other Secured Obligations of, in either case, of any Priority shall "materially adversely affect the Holders of Securities of any other Priority for the purposes of this Ordinance so long as such amendment does not change any coverage percentage established for such Priority of Securities or is not an amendment that requires the concern of the Holder of such Security under Section 23B(a)(1) or (2).

(b) A continuation of the rating of the Securities held by Holders affected by any amendment of or supplement to this Ordinance shall be conclusive evidence that such Holders were not materially adversely affected by such amendment or supplement.

B. Amendments With Consent.

(a) With the consent of the Holders of not less than 51% in principal amount of Securities here Outstanding, the City may from time to time and at any time amendment shalt:

(1) reduce the aloresald percentage of Holders of Securities required to consent.

counce; proved, that no such amend-ment shall:

(1) reduce the storesald percentage of holders of Securities required to consent to an amendment to this Ordinance with-out the consent of the Holders of all Securities then Outstanding, or (2) without the consent of the Holder of each Security affected theraby;
(i) extend the fixed maturity of such Security or reduce the rate of interest thereon or extend the time of payment of interest, or reduce the amount of the prin-cipal or redemption premium thereof, or reduced or extend the time for payment of any premium psyable on the redemption thereof, or

thereor, or

(ii) change the Priority of such Security
or deprive such Holder of the right to payment of such Security from Pledged

or coprine such receive or use right to perment of such Security from Pledged
Assets.

(b) it shall not be necessary for the
consent of the Securityholders under this
Section to approve the particular form of
any proposed Ant of Counsel but it shall
be sufficient if such consent shall approve
the substance thereof. The consent of the
Holder of a Security shall bind all Holders
of any Security for which such Security
was the predecessor.

(c) For the purpose of acquiring consent for the purpose of this Section, the
consent of a Securityholder acquiring a
Security in an offering remarksting. In
which the offering or remarksting circular
or other disclosure document thilly disclosed the terms of such amendment or
supplement shall be considered obtained
as if such consents were being solicited
under this Section, but no actual consent
shall be required, and no more than one
such disclosure shall be required.

(d) Promptly after an Act of Council
amending this Ordinance pursuant to this
section has obtained the requisite consent, the Finance Director shall cause the
Timuster Agent ot notify, by mail at their
addresses shown in the Hegistry, or by
publication, Holders of all Outstanding
Securities affected by such amendment,
of the general terms of the substance of
such Act of Council. Filing notice pursuant
to the continuing disclosure agreement to
the continuing disclosure agreement in
respect of such Securities shall constitute
sufficient notice for the purposes of this
subsection.

Section 24. Severability and Captions.

sufficient notice for the purposes of this subsection.

Section 24. Severability and Captions.

(a) If any section, paragraph, clause for provision of this Ordinance shall be held invalid, the invalidity of such section, paragraph, clause or provision shall not affect any other provision of this Ordinance.

(b) Captions—of reactions—and open provision of this Ordinance.

(b) Captions—of reactions—and provision of the convenience of reference only and are not part of this Ordinance.

. . . .

Part III

Section 1. Consent of Bondholders and Junior Lien Bondholders.

(a) The registered owner or beneficial owner of each series of Bonds and Junior Lien Bonds issued after the effective date of this Ordinance by its acceptance thereof expressly consents to the amendments contained in Part II (the "Part II Amendments").

(b) Al, but not untill, such time: as the owners of not less than 51% in principal amount of the Bonds then outstanding and the owners of not less than 51% in principal amount of the Junior Lien Bonds then outstanding (including without limitation each series of Bonds and Junior Lien Bonds issued after the effective date of this Ordinance upon the issuance thereof) shall have consented to the Part II Amendments, Ordinance No. 27-86 shall be amended and restated as herein provided. Promptly thereafter, the City shall cause the Transfer Agent to provide notice setting forth in general terms the substance of the Senior Lien Bondholder and Second Lien Bondholder Approval Amendments, in accordance with Section 2. Severability: Paragraph Headings; and Conflict.

If any section, paragraph, clause or provision of this Ordinance shall be held invalid, the invalidity of such section, paragraph, teause or provision shall not affect any other provision of this Ordinance. The praragraph headings in this Ordinance. Section 3. Publication and Recordance in this Ordinance are furnished for convenience of reference only and shall not be considered to be part of this Ordinance.

Section 3, Publication and Recorda-tion.

This Ordinance shall be published in full in the Detroit Legal News, a newspa-per of general circulation in the City qual-lifed under State Law to publish legal tolices, promptly after its adoption.

Section 4. Effective Date.

This Ordinance shall be effective imme-

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|------------|----------|------------------------------|
| diately.   |          | •                            |
| (J.C.C. p. | )        | October 18, 2001             |
| Passed:    | •        | October 18, 2001             |
| Approved:  |          | October 19, 2001             |
| Published: |          | October 22, 2001             |
| Effective: |          | October 22, 2001             |
|            |          | JACKIE L. CURRIE             |
|            |          | City Clerk                   |
|            |          |                              |

:: <u>:</u>::

# **EXHIBIT 12**

| STATE OF | MICHIGAN, | ,   |
|----------|-----------|-----|
| City o   | f Detroit | SS. |

#### CITY CLERK'S OFFICE, DETROIT

|                                                                                                    | ,                         |                                       |
|----------------------------------------------------------------------------------------------------|---------------------------|---------------------------------------|
| I, Jackie L. Currie                                                                                | , City                    | Clerk of the City of Detroit, in said |
| State, do hereby certify that the anne                                                             | exed paper is a TRUE COPY | OF_Resolution                         |
| adopted (passed) by the City Council                                                               | l at session of           |                                       |
| -                                                                                                  | January 26,               | 2005                                  |
| and approved by Mayor                                                                              |                           |                                       |
| -                                                                                                  | February 1,               | 2005                                  |
| as appears from the Journal of said that I have compared the same with the whole of such original. |                           |                                       |
|                                                                                                    | In Witness Whe            | reof, I have hereunto set my hand     |
|                                                                                                    | and affixed               | the corporate seal of said City, at   |
|                                                                                                    | Detroit, this             | 2.3rd                                 |
| _                                                                                                  | day of M                  | A.D. 2005                             |
|                                                                                                    |                           | CITY CLERK                            |

#### DETROIT CITY COUNCIL ORDINANCE ADOPTED ON JANUARY 26, 2005 AND APPROVED BY THE MAYOR'S OFFICE ON FEBRUARY 1, 2005 PRINTED IN THE DETROIT LEGAL NEWS DATED FEBRUARY 7, 2005

Ordinance No. 01-05

AN ORDINANCE to Amend and Restate Ordinance No. 30-02 of the City of Detroit to Provide for the Issuance of SRF Junior Lien Bonds to Evidence \_oans from the State Drinking Water Revolving Fund.

Whereas, Ordinance No. 30-02 provides for the financing and refinancing of capital improvements to the Water Supply System (the "System") of the City of Detroit, Michigan (the "City"), by the issuance from time to time of Water Supply System Revenue Bonds and

Revenue Refunding Bonds; Whereas, The City Council of the City desires to amend and restate Ordinance No. 30-02 to provide for the issuance of SRF Junior Lien Bonds to enable the: City to finance eligible improvements to the System with low-cost loans from the State Drinking Water Revolving Fund established pursuant to the federal Safe Drinking Water Act of 1974, as amended:

The City of Detroit Ordains: Amendment to Amend and Restate Ordinance No. 30-02

Ordinance No. 30-02, as amended to the date hereof is hereby amended and restated in its entirety to read as set forth. below. Text to be deleted is shown thus. and text to be added is shown thus. Such amendment and restatement to take effect as provided in Section 25 hereof.
SECTION 1. DEFINITIONS — GENERAL.

Whenever used in this Ordinance, except when otherwise indicated by the context, capitalized terms not defined herein and defined in the preamble hereto are used herein as defined in the preamble, and the following terms shall have the

following meanings: "Act 34" means Act 34. Public Acts of

Michigan, 2001, as amended.
"Act 94" means Act 94, Public Acts of Michigan, 1933, as amended.

"Act of Council" means a resolution or

ordinance of the Council, as required or . permitted by law to authorize or otherwise give effect to the subject matter thereof.

"Additional Securities" has the meaning given that term in Section 20(C)(1).

"Ancillary Obligation" means any Reimbursement, Obligation and any Hedge Obligation.

"Ancillary Obligation Fees Expenses" means any fees and expenses in connection with any Hedge or Financial Facility in the ordinary course of the trans-

"BMA Municipal Index" means the index based upon the weekly interest rates of tax-exempt variable rate issues included in a, database maintained by Municipal Market Data, Boston, Massachusetts, a Thompson Financial Services Company (or its successor), which meet specific cri-teria established by The Bond Market

"Bond Counsel's Opinion" means an opinion signed by an attorney or firm of attorneys of nationally recognized standing in the field of law relating to municipal, state and public agency financing, selected by the City.

"Bond insurance" means any policy of insurance, contract of suretyship, guaran-

ty or other agreement intended to protect. Holders of particular Securities from loss arising from a failure of the City to timely pay principal (and premium, if any) of and interest on such Securities and pursuant to which the provider thereof is repaid solely as subrogee without creating any additional payment obligations (other than the payment of a premium or annual fee).

"Capital Appreciation Securities" means Securities that pay interest only at maturi-

"City" means the City of Detroit, County of Wayne, State of Michigan. "Code" means the Internal Revenue Code of 1986, as it may be amended arro the rules and regulations promulgated thereunder or applicable thereto:

"Commissioners" means the Board of Water Commissioners of the City created by Article 7, Section 7-1501, of the Charter of the City or any successor body, "Construction Fund" means the fund

established pursuant to Section 14.

"Council" means the City Council of the

y. "Counterpart Securities" Securities that bear interest at rates which vary inversely to each other and that were issued, contemporaneously with each, other in order to produce a single fixed rate in order to constitute. Counterpart Securities both counterparts must be Outstanding at the same time and in such amounts, and with such amortizations schedules as to maintain the fixed rate so-

utilized on the Coverage Determination, means a determination of the ratio of Net Revenues. to indebtedness with respect to Securities tor purposes of fixing or revising rates or issuing Additional Securities or incurring additional Secured Obligations.

"Credit Enhancement" means any Credit Facility and any Bond Insurance.

Credit Enhancement" means any letter of credit, line of credit, purchase agreement, surety bond or other financial arrangement, other than Bond Insurance, intended to protect Holders of particular Securities from loss arising from a failure. of the City to timely pay principal of and interest on such Securities or intended to secure an obligation to fund an account or fund, such as a Reserve Account.

"Debt Service Installment Requirement" means, as of the first day of each month with respect to a Priority of Outstanding Securities and Ancillary Obligations, if any, the total for such month of the (i) Interest Installment Requirement, (ii) Principal Installment Requirement and (iii) Sinking Fund Installment Requirement, if any

"Excluded Tender Securities" means:

(i) Tender Securities that the City is notobligated to purchase under any circumstances upon the failure of the remarketing thereof and for which the City has not provided a Liquidity Facility; and

(ii) Tender Securities for which the City has provided a Liquidity Facility.

"Extraordinary Repair and Replacement Maximum Requirement" means, for any Fiscal Year, 15% of the budgeted operation and maintenance expense of the System for such Fiscal Year less in the Fiscal Year any amount that is withdrawn

from the Extraordinary Repair and Replacement Reserve Fund for paying a. major unanticipated repair or replacement to the System pursuant to Section 13D. but only in the Fiscal Year that such

amount is withdrawn.
"Extraordinary Repair and Replacement Minimum Requirement" means, for any Fiscal Year, 1/12 of 3% of the budgeted operation and maintenance expense of the System for such Fiscal Year plus such amount as is necessary to restore to the Extraordinary Repair and Replacement Reserve Fund any amount credited to the improvement and Extension Fund ...

Finance Director" means the Finance Director of the City or any successor officer of the City responsible for performing the duties of the Finance Director pur-

suant to the Charter of the City."
"Financial Facility" means any Credit
Enhancement, Liquidity Facility or combined Credit and Liquidity Facility.

"Fiscal Year" means the fiscal year and operation of the City which begins on July and ends on the following June 30 as it may be modified.
"Fixed Rate Security" means a Security."

that bears interest at a rate that has been fixed for at least a five-year period that includes all of the Fiscal Year for which a calculation of Annual Debt Service is made of to its scheduled maturity, whichever is shorter provided however

(i) If the Fiscal Year for which a calculation of Annual Debt Service is made includes only a portion of such five year period, a Security is also a "Fixed Pate" Security" but only for such portion;

(ii) A rate is fixed for purposes of determining whether a Security is a "Fixed Rate" Security" if the economic effect of a Security bearing interest at a fixed rate is produced by a Qualified Hedge or by Counterpart Securities; and.

(iii) A rate is variable for purposes of determining whether a Security is a "Fixed Rate Security" if the economic effect of a Security bearing interest at a variable rateis produced by a Qualified Hedge: --

Government Obligations" means direct obligations of the United States of America or obligations the principal of and interest on which is fully guaranteed by the United States of America, including U.S. Treasury Trust Receipts.

"Hedge" means any agreement by which the City is authorized or permitted by law to manage its debt service, either in connection with the proposed issuance or issuance of Securities; or in connection with its then Outstanding Securities, including, but not limited to; interest rate exchanges or swaps; hedges and similar agreements.

Hedge Obligations" means the City's payment obligations under a Hedge other than the obligation to pay fees and expenses in the ordinary course of the

transaction.
"Hedge Termination Payment" means an amount payable by the City under a Hedge by reason of the early termination.

"Hedge Receivable" means any amount receivable by the City under a Hedge

including any amount by reason of the early termination thereof.

"Holder" or "Securityholder" means the Person in whose name a Security is registered in the Registry.

"Indebtedness" has the meaning given that term in Section 2.

"Interest and Redemption Fund" means any Interest and Redemption Fund established for a Priority of Securities.

"Interest Installment Requirement" means, as of the first day of each month in a Fiscal Year, with respect to Securities and Anoillary Obligations of the same Priority of Lien, the amount of interest: accrued and unpaid and to accrue to and accrued and unpaid and to accrue to and including the last day of such months on Outstanding Securities of such Priority of Lien and Parity Ancillary Obligations that constitute interest, if any, next coming due in such Fiscal Year.

"Junior Lien Bonds", means tall Securities issued pursuant to this Ordinance other than Senior Lien Bonds."

"Junior Obligations" means all Junior.

"Junior Obligations" means all Junior Lien Bonds and all Ancillary Obligations that are not Senior Obligations. "Legal investment" means, with respect

to any particular amounts, an investment that is authorized or permitted by law, as: an investment of such amounts, including: 

"Liquidity Facility" means any letter of credit, line of credit, purchase agreement,

or other financial arrangement intended to provide funds for the purchase of certain. Securities in the event of a failure of the remarketing thereof but does not include any protection provided by a Credit

Facility.
"Mandatory Redemr fron Date" means a date on which Term Securities in the prinoale of which term describes a mount of the applicable Mandatory Redemption Requirement are required to be redeemed under the Supplemental Action authorizing the sale of such Securities. Securities."

Securities:
"Mandatory Redemption Requirements"
means, with respect to any Term
Securities, the principal amount of such
Securities required to be called for redemption prior to their stated maturity as provided in the Supplemental Action authorizing the sale of such Term Securities.

"Net Revenues" means, for any period of time, all Revenues received during such period of time, except for those Revenues transferred to the Operation and Maintenance Fund.

"Operation and Maintenance Fund" means the fund established pursuant to

Section 12(A)(1), "Outstanding", unless otherwise provided in a Supplemental Action for particular ed in a Supplemental Action for particular Securities, means; as of any date and with respect to Securities of a particular Priority of Lien, all Securities of such Priority of Lien delivered under this Ordinance

(i) Securities of such Priority of Lien theretofore paid or redeemed or acquired by the City and surrendered to the Transfer

Agent for cancellation;
(ii) Securifies of such Priority of Lien that have matured or have been duly called for redemption and for the payment or redemption of which amounts, together with any unpaid interest, are held by the Trustee or the Paying Agent for the payment thereof:

(iii) Securities of such Priority of Lien that have been defeased in accordance with this Ordinance or a Supplemental Action; and

(iv) Securities of such Priority of Lien in exchange for or replacement of which other Securities of such Priority of Lien have been authenticated and delivered pursuant to this Ordinance or a Supple 1984 53846-tit

"Parity Ancillary Obligations" means, as to Securities, those Ancillary Obligations which have the same Priority of Lien, regardless of whether the Ancillary Obligations were entered into with respect

to those Securities or Securities with a difference Priority of Lien.

"Permitted Investment" means, with respect to any particular amounts, a Legal Investment subject to such limitations as may be imposed by this Ordinance or a Supplemental Action for the investment of

such amounts. "Person" means any natural person, "Person" means any natural person, firm, association, corporation, trust partnership, joint venture, joint-stock company, municipal corporation, public body or other entity, however organized.

"Pledged Assets" means:

(i) Net Flevenues.

(ii), the funds and accounts established by or nursignant to this Ordinance except for

by or pursuant to this Ordinance except for the Operation and Maintenance Fund and the Construction Fund and any account the construction Fund and any account

thereof; (iii) investments of amounts credited to

any fund, account or subaccount that is a Pledged Asset; and (iv) any income of gain realized from investments that and Pledged Assets to

(iv) any income or gain realized from investments that are Pledged Assets to the extent that such income or gain is not a Net Revenue.

"Principal installment" means, with respect to Securities of the same Priority of Len and related Antillary Obligations any, the income of the Antillary Obligations and such of the Ancillary Obligations related to such Securities if any, that constitute principal or other return of capital.

"Principal Installment Requirement" means, as of the first day of each month in a Fiscal Year, with respect to a Priority of Obligations, the was mount of Principal Installments accrued and unpaid and to accrue to, and including, the last day of such month (assuming that principal accrues on the basis of 30-day months in a year of 360 days) on Outstanding Securities of such Priority of Lien and related Ancillary Obligations, if any, next coming due in such Fiscal Year.

"Priority of Lien" means, with respect to any, particular Secured Obligation, all

"Priority of Lien" means with respect to any particular Secured Obligation, all other Secured Obligations having a lien on Pledged Assets on a parity with such Obligation.

Obligation. "Qualified Hedge" means a Hedge with a counterparty that is rated directed or indirectly by a Rating Agency in a rating category at least equal to the category in which the subject Securities are rated without benefit of Credit Enhancement and without reference to qualifications such as "plus" or "minus". If the subject Securities are not rated without the benefit of Credit Enhancement, then the rating category of such Securities shall be the rating category with the benefit of Credit Enhancement Enhancement.

"Rate Stabilization Fund" means the fund created under Section 13(G)(2).

"Rating Agency" means any nationally recognized statistical rating organization as defined in Rule 15c3-1 of the United States. Securities and Exphence Securities and Exchange Commission,

Receiving Fund" means the Water Supply Receiving Fund established under

Section 12(A)(1).

"Refunding Securities" means Additional Securities issued for the purpose of refunding Outstanding Securities.

"Reimbursement Obligation" means the City's repayment obligations under a

"Required Combined Coverage" means, for two or more Securities of a different for two or more Securities of a different Priority of Lien for which a Coverage Determination is to be made, the result produced by dividing the Net Revenues projected for the Fiscal Year of calculation by the prescribed related indebtedness coming due during such Fiscal Year.

"Reserve Account" means a Reserve Account established in an Interest and Redemption Fund and may be restricted in meaning by referring to Securities of the same Priority of Lien for which such Reserve Account was established

"Reserved Amount" means any amount on deposit in the Rate Stabilization, Fund

which is taken into account in connection with any Coverage Determination "Reserve Requirement" means, for Securities of the same Priority of Lien for which a Reserve Account her beam Account her beam for the same Priority of Lien for which a Reserve Account her beam for the same Priority of Lien for the which a Reserve Account has been estab-lished, the lesser of the amount of Annual Debt Service on all Securities of the same Priority of Lien then Outstanding for the current or any future Fiscal Year or the current or any luture issue the Code maximum amount permitted by the Code as provided below:

as provided below:

(i) for Senior Lien Bonds, the "amount of Annual Debt Service" shall be maximum Annual Debt Service.

(il) for Second Lien Bonds, the "amount of Annual Debt Service" shall be maximum Annual Debt Service; and

Annual Debt Service; and
(iii) for all other Junior Lien Bonds for
which a Reserve Account is established,
the amount of Annual Debt Service shall the amount of Annual Deut Service Stall be "the amount set forth in the Supplemental Action establishing such Reserve Account, and if no amount is set forth the "amount of Annual Debt Service"

shall be average Annual Debt Service. "Revenues" means the revenues of the City from the System which shall be con-

"Hevenues" means the revenues of the City from the System, which shall be construed as defined in Section 3 of Act 94, and shall also include."

(I) "Hedge Receivables, and gain realized from the investment of amounts in the various funds, accounts and subaccounts established by this Ordinance, other than the Construction Fund for any Fiscal Year earnings on the Construction Fund are not credited to the Receiving Fund are not credited. Ancillary Obligations and Ancillary Obligation Fees and Expenses. "Securities" means all Senior Lien Bonds and all Junior Lien Bonds. "Securities to be Refunded means the Particular "Qustanding Securities to be Refunded means the

"Securities to be Refunded" means the Particular Oustanding Securities to be refunded by Refunding Securities issued.

refunded by Herunding Securities issued for such purpose.

"Senior Lien Bonds" means all Securities issued under this Ordinance that have a senior lien on Pledged Assets.

"Senior Obligations" means all Senior Lien Bonds and Ancillary Obligations in respect of Senior Lien Bonds and secured on parity therewith and including all Junior on parity therewith, and including all Junior Lien Bonds that have acceded to a parity status with Senior Lien Bonds pursuant to Section "5(F) hereof and Ancillary Obligations in respect thereof, secured on a parity therewith, if any.

"Sinking Fund Installment Requirement"

means, with respect to Term Securities of the same Priority of Lien and as of the first day of each month in a Fiscal Year, the amount of any Mandatory Redemption Requirements next coming due in such ty of Lien in to ordinary course of the transaction.

"Registry" means the books for the registration and transfer of registration are or a securities as provided in Section 3G(1).

City's repayment obligations under a Financial Facility, and does not include the obligation to pay fees and expenses in the ordinary course of the transaction.

"Registry" means the books for the registration of securities as provided in Section 3G(1).

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Term Securities, if any.

"State" means the State of Michigan. "Supplemental Action" means an Act of Council or a sale order or other document signed by the Finance Director pursuant to an. Act of Council, which shall be this Ordinance if the action of the Finance

Director is herein authorized.
"System" means the Water Supply
System of the City including all plants, works, instrumentalities and properties; used or useful, in connection with obtaining a water supply, the treatment of water or the distribution of water, as the same now exists, together with all additions, extensions, repairs and improvements thereto hereafter acquired.
"Tender Securities" means Securities

that are subject to optional or mandatory

tender for purchase.
"Term Securities" means, with respect to Securities of the same Priority of Lien, any maturity of such Securities that has Mandatory Redemption Requirements.

"Transfer Agent" means, as to any particular Securities, the bank or banks selected by the Finance Director to perform the duties provided for the Transfer Agent with respect to such Securities: "Trustee" means U.S. Bank National

Association or any successor Trustee selected by the Finance Director to perform the duties of trustee under Section 19 hereof.

"Variable Rate Security means any Security that is not a Capital Appreciation

Security or a Fixed Rate Security.

Section 2. Definition of Annual Debt

(iii) Hedge Termination Payments. (B) Fules for Calculating Principal

and Interest.

(1) First Day of Fiscal Year, Principal of. .: and interest on Securities coming due on the first day of a Fiscal Year shall be calculated as being due on the last day of the immediately preceding Fiscal Year.
(2) Assumed Paid. Principal of and

interest on any Securities due in a Fiscal Year prior to the Fiscal Year for which the calculation is made shall be assumed to have been paid when due.

(3) Due Dates. The due dates for any principal interest or Redemption Requirements are the stated dates for the payment thereof and not in advance of such stated dates by reason of accelera-

(4) Term Securities.

(i) Mandatory Redemption Requirements shall be treated as principal maturing on the respective dates that such Mandatory Redemption Requirements are due.

(ii) The principal amount of a Term Security maturing in a Fiscal Year shall be reduced by the total of the Mandatory Redemption Requirements due in each Fiscal Year before the Fiscal Year of such

(5) Tender Securities. Except for Excluded Tender Securities, each date on which Holders of such Tender Securities may tender or may be mandated to tender such Tender Securities shall constitute a maturity of the principal amount of such (6) Interest.

(i) Interest due in any Fiscal Year shall be offset by the amount of capitalized interest or interest received by the City as "accrued interest" available for the payment thereof.

'(ii) Separate provision is made in this Section for determining the interest rate

(a) Variable Rate Securities as provided in subsection (C) below, and ...

(b) Fixed Rate Securities converting to

Variable Rate Securities as provided in subsection (D) below.

(C) -Variable Rate Securities.

(1)\* If Variable Rate Securities have been Outstanding for less than a full Fiscal Year on the date of calculation, then the interest rate on such Variable Rate Securities shall be calculated as 125% of the average of the BMA Municipal Index (as hereinafter defined) for the five year period ending not more than one week

period ending not more than one week before the date of such calculation:

(2) If Variable Rate Securities have been Outstanding for one of more full Fiscal Years on the date of calculation, then the interest rate on such Variable Rate Securities shall be calculated as 125% of the annualized average daily rate borne by such Variable Rate Securities for the 12 calendar month period ending immediately before the month of calcula-

(3) Notwithstanding paragraphs (1) and (2), for the purpose of determining the Reserve Requirement for Securities of the same Priority of Lien, the interest rate on Variable Rate Securities shall be not adjusted after the date of initial issuance.

(D) Fixed Rate Securities Convertible to Variable Rate Securities.

If Securities are issued as Fixed Rate Securities but are intended to convert by

their terms to Variable Rate Securities, during a tuture Fiscal Year and a calculation is made for such future Fiscal Year of any Fiscal Year thereafter There' the Fiscal Year of conversion shall be the First Year that such Securities are Outstanding for the purpose of calculating interest at a variable rate.

(E) Capital Appreciation Securities. For the Capital Appreciation Securities, the Accreted Value per \$5,000 due at maturity shall be as determined semiannually to maturity on such dates as specified in a Supplemental Action. For purposes of the rate covenants in Section 9, the Additional Securities requirements of Section 20, and for all other purposes of this Ordinance, the Accreted Value of Capital Appreciation Securities shall be deemed to be due and payable in the Fiscal Years in which such Accreted: Value shall actually be due and payable by the City into the Senior Lien Bond and interest Redemption Fund or the Second Lien Bond Interest and Redemption Fund, as applicable, or assumed paid under

(B)(2) above, as applicable. Sec. 3. Authorization and Issuance of Securifies; Related Matters.

(A) Authorization of Securities. Securities shall be authorized from time to time by Acts of Council and Supplemental

(B) Issuing Securities. The Finance Director may, by Supplemental Action, take such actions as are necessary or appropriate to give effect to the transactions contemplated by an Act of Council authorizing the issuance of Securities or.

as are incidental thereto.
(C) Liability Limited. All covenants, agreements and obligations of the City contained in this Ordinance or in any Secured Obligations are those of the City and not of any member, officer or employor for any claims based thereon or here-

or for any claims based thereon or here-under against any member, officer or employee of the City or any natural Person executing or attesting any Secured Obligations.

(D) Execution, Authentication and Delivery of Securities.

(1) Securities shall be executed in the name of the City by the facsimile signatures of the Mayor and the Finance Director and shall have a facsimile of the City's seal impressed imprinted or otherwise reproduced thereon.

(2) No Security shall be valid until authenticated by an authorized representative of the Transfer Agent. Securities

authenticated by an authorized representative of the Transfer Agent. Securities shall be 'delivered' by the 'City' to the Transfer Agent for authentication and be delivered to 'the Transfer 'Agent' by 'the Finance Director or designed for delivery to 'the purchaser(s), 'in accordance with the purchaser of the 'purchase price therefor in accordance with the bid or purchase contract. Executed blank Securifies.' chase contract. Executed blank Securities for registration and issuance to transferees shall; from time to time as riecessary, be delivered to the Transfer Agent for

be delivered to the transfer Agent for safekeeping.

(E) Reserve Account Requirement.

Concurrently with the issuance of Securities of a Priority for which a Reserve Account has been or is being established there shall be credited to such Reserve Account the amount that added to the amount or deposit therein or added to the amount on deposit therein or credited thereto; equals the Reserve Requirement for Securities then to be issued and all Securities of such Priority then Outstanding. Such amount may be provided from any source or may be pro-

provided from any source or may be provided by a Financial Facility meeting the requirements of Section 4 Financial Facility meeting the requirements of Section 4 Financial Facility meeting the requirements of Section 4 Financial Facility Sections of the Section 5 Financial Facility Sections of the Section 5 Financial Facility Section 6 Financial Facilities to be applied to mext maturing interest thereon.

(2) If a Reserve Account has been on the same Priority of Lien as such Securities, the amount necessary to comply with subsection (E), above, unless such compliance will be obtained with amounts from a different source, or by the deposit from a different source, or by the deposit of a Financial Facility meeting the requirements of Section 4.

(3) The balance of the proceeds, including premium, if any, shall be applied as provided in the Supplemental Action providing for the issuance of such

Securities.
(G) Transfer of Registration of Securities.

(1) Maintenance of Books. Each Transfer Agent shall keep or cause to be kept, at its principal office, sufficient

kept, at its principal office, sufficient books for the registration and transfer of registration of Securities for which it is Transer Agent, which shall at all times be open to inspection by the City.

(2) Privilege of Transfer. Under such reasonable regulations, as the Transfer Agent may prescribe, the registration of Securities for which it is the Transfer Agent may be transferred upon its Registry by the Person in whose name such Securities are registered, in person such Securities are registered, in person or by his or her duly authorized attorney, upon surrender of such Securities for calcellation, accompanied by delivery of a duly executed written instrument of transfer in a form approved by the Transfer Agent for such Securities.

(3) Surrender for Transfer; Receipt of New Securities. Whenever any Security is

and not of any member, officer or employrender Securities that could be tendered on such date with the giving of notice or the passage of time, or both.

13-53846-tjt Doc 6644-1 and not of any member, officer or employee of the City in his or her individual capacity, and no recourse shall be had for the passage of time, or both.

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aggregate principal amount, of the same maturity, and bearing the same rate or rates of interest and otherwise of the

maturity, and bearing the same rate or rates of interest and otherwise of the same tenor as the Security surrendered for transfer.

(4) Transfer Taxes and Governmental Charges The Transfer Agent shall require payment by the Holder reducing the transfer of any statistic of which it is the Transfer of any statistic of which it is the Transfer of any statistic of which it is the Transfer of any statistic of which it is the Transfer of any statistic of which it is the Transfer of any statistic of which it is the Transfer of the statistic of the provided of the statistic of the stat

(H) Mutilated, Lost or Stolen

(1) If any Security is mutilated, the City, at the expense of the Holder of the Security, shall execute, and the Transfer Agent for such Security shall authenticate and deliver, a new Security of like tenor in exchange and substitution for the mutilated Security, upon surrender to such

Transfer Agent of the mutilated Security.

(2) If any Security is lost, destroyed or (2) If any Security is lost, destroyed or stolen, evidence of ownership of the Security and of the loss, destruction or theft may be submitted to the Transfer Agent for such Security and in this evidence is satisfactory to the Sity and the Transfer Agent, and indemnity satisfactory to such Transfer Agent and the City shall be given; and if all requirements of any applicable law, including Act 354; any applicable law, including Act 354; Public Acts of Michigan, 1972, as amended, have been met, then, at the expense of the Holder requesting the substitute Security, the City shall execute, and such Transfer Agent shall thereupon authenti-cate and deliver, a new Security of like tenor and bearing the statement required by Act 354, or any applicable law here-after enacted, in lieu of and in substitution after enacted; in lieu of and in substitution for the Security so lost, destroyed or stolen. If any such Security shall have matured of shall be about to mature; the Transfer Agent may pay the same without surrender thereof as authorized by Act 354 instead of issuing a substitute Security.

Section 4, Financial Facilities; Hedges: (A) The Finance Director may, from time to time and at any time, obtain a Financial Facility in respect of all or some Securities if the Finance Director determines such to be in the best financial

interests of the City.

(B) The Finance Director may at any time acquire a Credit Enhancement to fulfill the City's obligation to fund any Reserve Account or substitute a Credit Enhancement for amounts in a Reserve Account: The Credit Enhancement shall be deposited with and payable to the Transfer Agent in its capacity as paying agent for the related Securities. Before or concurrently with the acquisition of such Credit Enhancement, the Finance Director shall receive:

(1) an opinion of nationally recognized bond counsel to the effect that such substitution will not adversely affect the tax-exempt status of interest on any Securities;

(2) evidence that such Credit Enhancement is provided by a provider rated (3) a copy of the Credit Enhancement;

(4) an opinion of counsel satisfactory to said nationally recognized bond coun-sel to the effect that the Credit Enhancement is valid and enforceable in accordance with its terms.

(C) The Finance Director may, subject to the requirements of Act 34 or in accordance with any other applicable law, from time to time enter into such Hedges as the Finance Director determines to be in the best financial interests of the City."

(D) The Finance Director may grant to the provider of any Financial Facility, or to any counterparty to any Hedge authorized by this Section, such rights as may be necessary or appropriate that are not inconsistent with this Ordinance, Act 34 or any other applicable law.

Section 5: Security for Payment.

(A) The payment of Secured Obligations is secured by a statutory lien, which is hereby created, upon the whole of the Pledged Assets subject to the use and application thereof in accordance with this Ordinance.

(B) The "lien securing "Hedge

Obligations is valid only to the extent permitted by law.

mitted by law.

(C) Except for Bond Insurance, a statement of the Priority of Lien of an Ancillary Obligation shall be contained in the instrument evidencing or providing for such Ancillary Obligation of providing for such Ancillary Obligation in respect of Securities of the same Priority of Lien.

of Securities of the same Priority of Lien:

(i) may be secured at a lower Priority of Lien; but and the secured at a higher Priority of Lien; but and the secured at a higher Priority of Lien; but a lower than that of the securities and the securities of the securities of the securities of the securities to which they are otherwise unrelated frowided that any lien securing Ancillary Obligations in espect of Senior Lien; Bonds shall be subject to the rights of the holders of the subject to the rights of the holders of the subject to the rights of the holders of the City's outstanding Water Supply Systems Revenue Second Lien Bonds Series 1995-A except to the extent that such Ancillary Obligations arise in connection with a Financial Facility acquired to fund any portion of the Reserve Account or to. be substituted for cash therein

(D) The lien securing the payment of a Secured Obligation is subject to the fol-

lowing Priorities: --

(1) The lien securing Senior Obligations shall be a first lien, senior to all other liens created hereunder except the lien securing Ancillary Obligations Fees and

Expenses which are further subject to the qualification of subsection (C)(2) above.

(2) The lien securing Junior Obligations shall be junior only to the lien securing Senior Obligations whenever issued.

Among Junior Obligations:

(i) the lien securing Second Lien Bonds and Parity Ancillary Obligations thereto shall be senior to the liens securing all other Junior Obligations; and

(ii) the lien of each other Priority-of Junior Obligations of the same Priority of Lien shall be senior to the lien of all lower

Priorities of Junior Obligations.

(iii) the SRF Junior Lien Bonds shall be the lowest Priority of Junior Lien Bonds, and the lien securing SRF Junior Lien Bonds and related Ancillary Secured Obligations shall be junior to the liens securing all other Junior Obligations, whenever issued.

(E) Each lien securing a Secured Obligation shall continue until either payment in full of such Secured Obligation or, in the case of Securities, is defeased as provided in Section 21 of this Ordinance. Ancillary Obligations shall be defeased in the manner provided in the agreement with the obligee of such Ancillary

(F) In accordance with this subsection the City may provide for the accession of Junior Lien Bonds to the status of complete parity with Senior Obligations when there shall have been filed with the Commissioners a certificate satisfying the requirements of Section 20(C) from a national consulting firm or a national firm of certified public accountants, and further reciting the opinion:

(1) that the Reserve Account contains an amount equal to the Reserve Requirement computed on a basis which includes all Securities then outstanding

and such Junior Lien Bonds;

(2) that all payments into the various funds and accounts hereinabove required to be held under this Ordinance are current as of the date of accession; and

(3) that the interest and Redemption Fund contains the amounts which would have been required to be accumulated therein on the date of accession if such Junior Lien Bonds had originally been issued as a Senior Lien Bonds; such amounts shall be shown in said certificate.

The accession of such Junior Lien Bonds shall be conclusively evidenced by notice from the City to the Trustee and each Holder of such Junior Lien Bonds.
Section 6. Payment of secured

obligation; subordination.

(A) Generally: Secured Obligations are not general obligations of the City and shall be payable solely from Pledged Assets as provided in this Section:

(1) Ancillary Obligation Fees and Expenses are payable from Revenues

and, to the extent of any insufficiency, Pledged Assets.

(2) All Securities and Ancillary Obligations are payable from Pledged Assets.

(B) Subordination.

(1) Whenever any principal (and pre-mium, if any) of and interest on Securities of the same Priority of Lien or any pay-ment on the Parity Andillary Obligations thereto is due and is not made when due; then until such payment is made or provision made for the payment thereof to the satisfaction for the Holders of such Securities and the obligees of such Parity Ancillary Obligations, no such payment shall be made directly or indirectly on or in respect of any Securities of a wlower Priority of Lien or any Ancillary Obligations which are Parity Ancillary Obligations to such Securities of lower Priorities of Lien (such Securities and Ancillary Obligations collectively; the "Subordinated Obligations" and the Holders and obligees thereof; the "Subordinated Obligees"), except as provided below with respect to defeased Securitiés.,

(2) Subject to the payment in full of all Securities and Ancillary Obligations of every higher Priority of Lien (collectively, the "Superior Obligations" and the Holders and obligees thereof, the "Superior Obligees"), the Subordinated Obligees shall be subrogated to the rights of the Superior Obligees to receive payment in full of the respective Obligations until all amounts owing on the Subordinated Obligations shall be paid in full:

(3) Except as otherwise provided in a Supplemental Action, the City-may agree with the Holders of Securities of any Priority of Lien and the obligee of any Parity Ancillary. Obligations thereto to extend, renew, modify or amend the terms of such Securities or such Parity Ancillary. Obligations thereto or any security therefor, and any such Holders or obligees may release, sell, exchange such security and otherwise deal freely with the City, and the City with any of them, all without notice to or consent of the Holders of any Securities of any lower Priority or the

in the highest rating category of each Rating Agency then rating the Securities with the obligee of such Albavino 18 58846-tych 1966-6445 gationsiled 08/11/14 Entered 08/11/11年22:07:117 PariPadei193 of 98

Obligations' thereto without affecting the liabilities of the City to such Holders or obligees.

(4) Nothing in this subsection shall impair the right of the Holders of any defeased Securities to be paid from the escrow effecting such defeasance.

(C) Financial Facilities. Except as otherwise provided in a Supplemental

(1) Nothing in this Section shall affect the payment of Securities from any Financial Facility obtained for the benefit of such Securities.

(2) No payment of an amount made by a drawing or disbursement under a Financial Facility to Holders of Securities which would otherwise have been made by the City shall be deemed to be a payment by the City on account of such Securities for the purpose of discharging the City's obligation on such Securities."

Section 7. Securityholders' Rights;

(A) The Holder or Holders of the Securities representing in the aggregate not less than 20% of the entire principal amount thereof then Outstanding, máy, by suit, action, mandamus or other proceedings, protect and enforce the statutory lien upon Pledged Assets, and may, by suit, action, mandamus or other proceedings, enforce and compel performance of all duties of the officers of the City, including the fixing of sufficient rates, the collection of Revenues, the proper segregation of the Revenues of the System and the proper application thereof. The statutory lien upon Pledged Assets, however, shall not be construed to give the Holders of the Securities the authority to compel the

sale of the System or any part thereof, (B) If there is a default in the payment of the principal and premium, if any) of and interest on any Securities; any court having jurisdiction in any proper, action may appoint a receiver to administer and operate the System on behalf of the City and, under the direction of the court, perform all of the duties of the officers of the City more particularly set forth herein, in Act 94 and in such orders of the court.

(C) The Holder or Holders of the Securities shall have all other rights and remedies given by Act 94 and by law for the payment and enforcement of the Securities and the security therefor.

Section 8. Management:

The operation, repair and management of the System, including all projects financed by the issuance of Securities, shall remain under the supervision and control of the Commissioners in the manner provided in Article 7, Chapter 15 of the Charter of the City, subject to the rights, powers and duties in respect there-to which are reserved by law and the City Charter to the Council.

Section 9. Fixing and Revising Rates; Rate Covenants.

(A) The coverage requirements for determining the Required Combined Coverage under this Section are the following percentages:

Priority of Indebtedness Percentage Senior Lien Indebtedness .......120% Second Lien indebtedness......110%

SRF Junior Lien Bonds

Prior to or concurrently with the issuance of Securities of a Priority of Lien not enumerated above, this subsection shall be amended to provide for the coverage percentage for Indebtedhess in respect of such Securities, but in no case shall the coverage percentage be less than 100. Such amendment shall not require the consent of Holders of any Securities.

(B) The rates for water service and the regulations shall be the rates and regularegulations shall be the rates and regulations shall be the rates and regulations required to be established by Act 94.

Such rates shall be highly lined by the stabilished to be time to time as may be expected to be

Water Supply System Receiving

Accounts.

Replacement Maximum Requirement in the stabilished of the time to time as may be expected to be

(1) the amounts required:

(i) to provide for the payment of the expenses for maintenance of the System as are necessary to preserve the same in good repair and working order; and

(ii) to provide for the payment of

Indebtedness coming due for the Fiscal

Year of calculation; and

(iii) to provide for the creation and
maintenance of reserves therefor as
required by the Ordinance or any ordinance or resolution adopted in accordance with the terms thereof and hereof;

(iv) to provide for such other expenditures and funds for the System as this Ordinance may require; and

(2) The Required Combined Coverage where the numerator is the Net Revenues projected for the Fiscal Year of calculation and the denominator is the Indebtedness coming due for such Fiscal Year.

(C) The City hereby covenants and agrees at all times to maintain such rates for services furnished by the System as shall be sufficient to provide for the foregoing and to repay any transfer from the Extraordinary Repair and Replacement Reserve Fund.

(D) Without taking into account any transfers from the Rate Stabilization Fund, the City shall at, all times observe and comply with the covenant contained in subsection (B)(2) above as if the Rate Coverage Percentage Were 100%.

which are under the provisions of Section 21 of Act 94 are made a lien on all premises served thereby, unless notice (accompanied by a copy of the lease of the affected premises, if any) is given to the Council that a tenant is responsible, are hereby recognized to constitute such lien and whenever any such charge against any piece of property shall be delinquent for six months; the City official or officials in charge of the collection thereof may certify to the tax assessing officer of the City not later than April 1 of each year the fact of such delinquency, whereupon such charge shall be entered upon the next tax roll as a charge against such premises and the lien thereof enforced in the same manner as general City taxes against such premises are collected and the lien thereof enforced; provided, however, where notice is given that a tenant is responsible for such charges and service as provided by said Section 21, no further service shall be rendered to such premises until a cash deposit equal to the esti-mated amount of the next ensuing bill shall have been made as security for payment of such charges and services.

(F) In addition to other remedies; provided, the City shall have the right to shut off and discontinue the supply of water to any premises for the nonpayment of water rates when due.

Section 10. No Free Service or Use;

Metered Service.

No free service or use of the System, or service or use of the System at less than cost, shall be furnished by the System to any person, firm or corporation, public or-private, or to any public agency or instrumentality, including the City and any other municipality. All service provided to customers of the System, with the exception of temporary connections and certain public service uses of the City which are billed on an estimated basis, shall be metered.

etered. Section 11. Operating and Fiscal

The System shall be operated on the basis of the Fiscall Year.

Section '12. Funds and Accounts; Flow of Funds.

(A) Establishment of Funds and

Water Supply System Receiving

· Operation and Maintenance Fund

Senior Lien Bond interest and Redemption Fund

Senior Lien Debt Service Account Senior Lien Bond Reserve Account

· Second Lien Bond Interest and Redemption Fund

-. Second Lien Debt Service Account · Second Lien Bond Reserve Account

· SRF Junior Lien Bond Interest and Redemption Fund

 SRF Junior "Lien" Debt " Service Account

· No SRF Junior Lien Bond Reserve Account is established

· Such Interest and Redemption Funds as are established by Supplemental Action for other Junior Lien Bonds of the same Priority of Lien by 1990 (1990)

Extraordinary Repair and Replacement Reserve Fund The Property Replacement Repl

Improvement and Extension Fund
 Surplus Fund

(2) Additional funds and accounts may be established for other Securities of the same Priority of Lien-by Supplemental Action of the Finance Director.

(B) Flow of Funds. Proceedings (B) particular and the control of t All Revenues shall be set aside as collected and credited to the Receiving Fund. As received, amounts credited to Fund. As received, amounts/credited the Receiving Fund shall be transferred seriatim into the following funds and accounts not only within the respective limitations and only if the maximum amount within such limitation has been transferred to the 'preceding fund or account:

account:

First: to "the "Operation" and Mainte nance Fund; a sum sufficient to provide for the payment of the next manns. tor the payment of the flext, monthly expenses of administration and operation of the System (including Ancillary Obligation Fees and Expenses) and such current expenses, for the maintenance thereof as may be necessary to preserve the same in good frepair and working order the same in good frequency to preserve the same in good frequency the same in good frequency to preserve the same in good frequency the good frequency to preserve the same in good frequency the good frequency to preserve the good frequency the good frequency to preserve the good frequency the good

Second hito the 'Senior Lien Debt Service Account; an amount that, when added to all other amounts then on. deposite therein, shall equal, the Debt-Service installment Requirement for Senior Lien Obligations as of the first day of such month; and the vice vice of Third: to the Senior Lien Bond Reserve

Account, an amount that when added to all other amounts then on deposit therein shall equal the Reserve Requirement for Senior Lien Bonds;

Fourth: to the Interest and Redemption Fund established for each Priority of Junior Lien Bonds, beginning with the Second Lien Bonds and continuing in descending order of Priority of Lien to, and including each, the Priority of Lien of Junior Lien Bonds:

first: to the Debt Service Account established for such Priority of Lien, an amount that, when added to all other amounts then on deposit therein, shall equal the Debt Service Installment Requirement for Junior Obligations of such Priority of Lien as of the first day of such month;

second: to the Reserve Account, if any, established for such Priority of Lien an amount that when added to all other amounts then on deposit therein shall equal the Reserve Requirement for such Priority of Lien of Lien (Lien Reserve Requirement). Priority of Lien of Junior Lien Bonds;

Fifth: to the Extraordinary Repair and Replacement Reserve Fund, the amount of the Extraordinary Repair and Replacement Minimum Requirement so long as the balance thereof is less than the Extraordinary Repair and Replace-ment Maximum Requirement except that an amount withdrawn from such Fund pursuant to Section 13D shall be deducted from the Extraordinary-Repair and

provided that no amount shall be deposited therein or credited thereto for so long as a borrowing from the Extraordinary Repair and Replacement Reserve Fund remains unpaid. ·

Section 13. Use and Application of Amounts in Funds.

(A) Receiving Fund. Amounts in the Receiving Fund shall be applied as received as provided in Section 12. Amounts not transferred to any other fund or account shall remain in the Receiving Fund until the last day of each Fiscal Year.

(2) Amounts remaining in the Receiving Fund as of the last day of each Fiscal Year shall be transferred to the Surplus Fund.

urplus Fund.
(B) Operation and Maintenance

Amounts in the Operation and Maintenance Fund shall be used to pay the expenses of administration and operation of the System (including "Ancillary Obligation Fees and Expenses and any rebates to the United States government that may be required by the Code) and such current expenses for the maintenance thereof as may be necessary to preserve the same in good repair and working order. National Control of the contr working order. 🚟 -

(C) Interest and Redemption Funds. (1) Generally Amounts in the Interest and Redemption Fund established for Securities and for Ancillary Obligations of the same Priority of Lien shall be applied to pay principal (and redemption premium, if any) of and interest on such Securities and amounts due on such Ancillary Obligations.

(2) Mandatory Redemption Require-

(i) A Mandatory Redemption Requirement for a maturity of Term Securities may be satisfied in whole or in part by the redemption of Term Securities of such maturoty or by the purchase and surren-der to the Transfer-Agent of such Term Securities from amounts credited to the Interest and Redemption Fund established for such Securities of Priority of Lien or purchased with other funds legally available therefor. The Finance Director shall elect the manner in which he/she intends to satisfy all or a portion of a Mandatory Redemption Requirement for particular Term Securities not less than 40 days prior to the due date of such Mandatory. Redemption Requirement unless otherwise provided in the Supplemental Action providing for the issuance of such Term Securities.

(ii) Unless otherwise provided in a Supplemental Action providing for the issuance of Term Securities, the City will receive a credit against the Mandatory Redemption Requirement for Term Securities for which such Mandatory Redemption Requirement was established that have been redeemed (other than by application of Mandatory Redemption Requirements) or otherwise acquired by the City prior to the giving of the notice of redemption and that have not been applied as a credit against any other-Mandatory Redemption Requirements.

(a) Not less than 40 days prior to any mandatory redemption date for Term Securities, the Finance Director shall give notice to the Transfer Agent that such Term Securities are to be so credited.

(b) Each such Term Security shall be credited by the Transfer Agent at 100% of the principal amount thereof against the Mandatory Redemption Requirement, and the principal amount of Term Securities to be redeemed on such mandatory redemption date shall be reduced accordingly and any excess over such amount shall be credited to future Mandatory-Redemption Requirements in such order as the Finance Director shall direct; provide 3 wy 8 46 and expliced to the System for resulting from the purchase, at less than such order as the Finance Director shall direct; provide 3 work shall file with the Commissioners as the stablished regular or for any other.

par, of such Term Securities shall be credited to the Receiving Fund.

(3) Reserve Accounts.

Except as otherwise provided herein, amounts in a Reserve Account shall be used solely for the payment of the principal (and premium, if any) of and interest on Securities and Ancillary Obligations of the same Priority of Lien for which such Reserve Account was established as to which there would otherwise be default.

(ii) If at any time the amount on deposit in or credited to a Reserve Account exceeds the Reserve Requirement for such Reserve Account the amount of such excess may be transferred there-from and credited to the Receiving Fund.

(iii) No further payments need be made into an Interest and Redemption Fund in respect of principal and interest after enough of the Securities for which such Fund was established have been retired so that the amount then held in such Fund including the Reserve Account therein, it any is equal to the entire amount of principal and interest which will be payable at the time of maturity of all the then Outstanding Securities of such Priority of Lien. 2019

(iv) A separate Reserve Account may be established for an issue of Securities by the Supplemental Action providing for the issuance of such Securities. 35

(a) Securities having the benefit of such Reserve Account may be issued but only if such separate Reserve Account is fully equal to the Reserve Requirement fer such Securities concurrently with the issuance of such Securities. its Reserve Requirement shall be made on a parity with payments into all other Reserve : Accounts restablished for Securities of the same Priority of Lien and shall not exceed, in any Fiscal Year, its proportionate deficit payment Proportionate Deficit Payment? means for a sep-arate Reserve Account the same proportion that the amount available to remedy deficits in each Reserve Account for such Priority bears to the aggregate deficit in all Reserve Accounts for such Priority in the second such Priority in the second seco

(D) Extraordinary . Repair (1) and Replacement Reserve Fund. (1) (1997)

(1) Amounts in the Extraordinary Repair and Replacement Reserve Fund may be used to pay the costs of making major unanticipated repairs and replacements to the System which individually have cost or are reasonably expected to cost in excess of \$1,000,000 as determined by the Commissioners.

(2) On and after the first day of each Fiscal Year, the Finance Director may, by Supplemental Action, transfer fo the Improvement and Extension Fund not more than 50% in aggregate of the bal-ance in this Fund on the first day of such Fiscal Year if, but only if (i) in the month of such transfer the full amount of the Extraordinary Repair and Replacement Minimum Requirement for each prior month in the current Fiscal Year has been credited to this Fund and (ii) the amounts of all prior transfers from this Fund to the Improvement and Extension Fund have been restored in full.

(3) The City shall fix rates and charges for the services supplied by the System sufficient to permit it to meet its obligations under Section 13D. :

(E) Improvement and Extension Fund.

The Improvement and Extension Fund shall be used for improvements, enlargements, extensions or betterment to the System.

(F) Surplus Fund.

Amounts from time to time on hand in the Surplus Fund may, at the option of the lawful purpose of the System; provided, however, that if and whenever there should be any deficit in the Operation and Maintenance Fund or in any Interest and Redemption Fund (including any Reserve Account therein) then transfers shall be made from the Surplus Fund to such funds in the priority and order named in Section 12 to the extent of any such deficit.

(G) Rate Stabilization Fund (1) As used in this Section Prior Revenue" means any amounts that constitute Revenues or Net Revenues and held under this Ordinance but only to the extent that such amounts may be applied to any lawful purpose of the System: "Prior Revenue" does not include any amounts held under this Ordinance that at the time are restricted in application to a specific purposes, such as, by way of illustration, the application of amounts in the Surplus Fund in the event of a deficit as provided in the provision to Section 13(F).

(2) The Commissioners may create a fund designated Water Supply System Rate Stabilization Fund (the "Rate Stabilization Fund"). No amounts shall be desposited therein or credited thereto. except Prior Revenues and then only if:

(i) such Prior Revenue is credited to the Rate Stabilization Fund in the Fiscal Year in which it was recognized by the City as Net Revenue or within 90 days after the end of such Fiscal Year,

(ii) the amount of such Prior Revenue is deducted from the amount of Net Revenue recognized in such Fiscal Year for all purposes of this Ordinance; and.,

(iii) the amount of Net Revenue recognized in such Fiscal Year at least meets the minimum applicable coverage requirements of this Ordinance for such Fiscal-Year after (i) such dedication and (ii) all, prior deductions in respect of such Fiscal Year pursuant to this clause. :

(3) Amounts on deposit in the Rate Stabilization, Fund may be taken into account with respect to any Coverage

Determination of the property of the control of the taken, into account for any. Coverage Determination, then such Reserved Amount shall be credited to the Receiving Fund for the Fiscal Year for which such

Coverage Determination is made. (5) Prior to the transfer of any Reserved Amount to the Receiving Fund. such Reserved Amount shall not be used or applied to any purpose except pursuant to Section 16 and then only after all 

Amounts may be applied to any lawful purpose of the System. Section 14. Construction Fund.

(A) There shall be established and maintained a separate depository fund designated the Construction Fund. The City may designate separate accounts in the Construction: Fund for different series of Securities for administrative purposes and to better enable the City to comply with its tax covenants in Supplemental? Actions regarding the exclusion from federal income taxation of interest on Securities.

(B) Amounts in the Construction Fund, shall be applied solely in payment of the cost of repairs, extensions, enlargements, and improvements to the System and any costs of engineering, legal, bond insurance premiums, if any, and other expenses incident thereto, to the financing there-

(1) Payments of the cost of repairs, extensions, enlargements and improve-

with the plans and specifications therefor; 'that it was done pursuant to and in accordance with the contract therefor; that such work is satisfactory; and that such work has not been previously paid for.

(2) Payment of the cost of engineering, legal, financial, bond insurance premium, etc., as provided in this Section shall be made under such procedures as established by and upon-submission of appropriate documentation to the Finance Director.

(C) Any unexpended balance remaining in the Construction Fund may in the discretion of the Commissioners be used for meeting any Reserve Requirement or for further improvements, enlargements and extensions to the System if, at the time of such expenditure, such use is approved by the Michigan Department of Treasury, if such permission is then required by law. Any remaining balance, after such expenditure shall be paid into the Interest and Redemption Fund established for the Securities of the Priority of Lien giving rise to such balance for the purpose of purchasing Securities of such. Priority at not more than the fair market value thereof but not more than the price at which such Securities may next be called for redemption or used for the purpose of calling such Securities for redemption. The City may provide additional: or different lawful uses formsuch; unexpended balance or remaining balance by Supplemental Action of the Finance Director which shall, nonethe-" less, be subject to receipt of, a Bond Counsel's Opinion that such use is permitted by applicable law and willn, of adversely affect the tax exempt status of Outstanding Securities. A Section 15. Depositaries

(A) Amounts in the several funds, accounts and subaccounts established pursuant to this Ordinance shall be kept in one or more accounts separate and apart from all other accounts of the City, and itkept in only one account shall be allocated on the books and records of the City in the manner and at the times provided in

this Ordinance. (B) Amounts: Injurithe Interest and Redemption Fund for Securities of the same Priority of Lien, shall be kept on deposit with one of the banks or trust companies where the principal of and interest on such Securities are payable.

(C) The depositary of all funds and accounts; except as otherwise specifically provided for herein, shall be those banks or trust companies designated from time to time as such by the Finance Director. Section 16. Priority of Funds.

(A) If amounts in the Receiving Fund, are insufficient to provide for the current requirements of the Operation and Maintenance Fund and each Interest and Redemption Fund (including the Reserve Account, if any therein), then any amounts or securities held in the Surplus Fund, the Improvement and Extension Fund and the Extraordinary Repair and Replacement Reserve Fund shall be credited or transferred, first, to the Operation and Maintenance-Fund and second, to the particular Interest and Redemption Fund, to the extent of the insufficiency therein from the aforesaid funds in the order listed.

(B) If any principal (and redemption premium, if any) of or interest on Securities of the same Priority of Lien or any related Ancillary Obligations become due (whether on a stated or scheduled date, by reason of call for redemption or otherwise), and there are insufficient amounts for the payment thereof in the Interest and Redemption, Fund estabfished for such Securities and Ancillary Obligations after applying payments in the Reserve Account, if any, established for such Securities, then there shall be applied to such payment amounts in each 644of Lien, beginning with the lowest Priority of Lien and proceeding seriatim in ascending order of Priority of Lien, until such payments are made in full. Section 17. Investments.

(A) Permitted Investments. The Permitted Investments for amounts held under this Ordinance are the Legal Investments for such amounts subject to the following:

(1) Investment of amounts in any Reserve Account shall be limited to obligations bearing maturity dates or subject to redemption, at the option of the Holder thereof, not later than ten years from the

date of the investment.
(2) Except as otherwise herein provided, investments shall mature at such times as it is estimated the funds therefrom will be required, but shall be limited to obligations bearing maturity dates or subject to redemption, at the option of the Horder thereof, not later than five years from the date of investments:

(3) A Supplemental Action may provide for limitations in addition to or in lieu of the above, limitations, on Legal Investments or may eliminate any of such

limitations.

(4) Notwithstanding paragraph (3), no
Permitted Investments for the defeasance of particular Securities may be-changed without confirmation from each Rating Agency that such change will not reduce the rating of such Securities.

(B) Where Held. To the extent required by Act 94, securities representing investments made under this Ordinance shall be kept on deposit with the bank or trust company having on deposit the fund or : funds or accounts from which the purchase was made.

(C) Disposition of Profit and Gain...

(1) Profit realized or, interest income, earned on investment of amounts in the Receiving Fund, Operation and Mains tenance Fund, Nany Interest is and Redemption Fund (including the Reserve, Account if any therein), the Extraordinary Repair and Replacement Reserve Fund, and Improvement and Extension Fund shall be credited to the Receiving Fund.

(2). Profit realized or interest earned on investments of funds in the Construction Fund relating to any series of Securities and any: Redemption Account (including any Reserve Account or Subaccount established for any Securities) shall be credited as received to the funds from which such investments were-made; provided, however, that profit realized or interest earned on the Construction Fund. relating to any series of Securities may, if permitted by law, be credited to the Receiving Fund at the option of the Commissioners...
(D) Valuation.

(1) Investments credited to any Reserve Account shall be valued at least annually on each January 1, unless otherwise specified in the Supplemental Action providing for the issuance of such Securities, at the market value thereof, and the City shall withdraw any excess immediately and, in the event of a deficit, budget such additional, deposits at the beginning of the next succeeding Fiscal Year in an amount necessary to maintain each Reserve Account at its Reserve Requirement. -

(2) Investments in the Extraordinary Repair and Replacement Reserve Fund shall be valued at least annually on each July 1 at the cost thereof.

Section 18. Covenants.

The City covenants and represents with the Holders of all Securities from time to time Outstanding that so long as any Securities remain Outstanding, as fol-

(A) Ownership and Authority. The

pledge and Pledged Assets as herein encumbered and pledged.

(B) Maintenance and Operation of System.

(1) The City will, through its Commissioners, or such successor board or body as may hereafter be legally charged with the duty of the operation of the System, maintain the System in good repair and working order and will operate it efficiently and will faithfully and punctually perform all duties with reference to the System required by the Constitution andlaws of the State, including the making and collecting, of sufficient rates for services rendered by the System and the segregation and application of the revenues of the System in the manner provided in this Ordinance.

(2) The City will from time to time make all needed and proper repairs, replacements, additions, and betterments to the System, so that the System may at all times be operated properly and advanta-geously, and whenever any portion of the System, shall have been worn out, destroyed or become obsolete, inefficient or otherwise unfit for use, the City will procure and install substitutes of at least equal utility and efficiency so that the value and efficiency of the System shall at all times be fully maintained.

maintain and keep proper books of record and account separate from all other records and accounts in which shall be made full and correct entries of all transactions relating to the System and the City will also cause an annual audit of such books and records for the preceding Fiscal Year to be made by an accountant who shall comment on the manner in which the City has complied with the requirements of this Ordinance. The City will make such audit available to the Holder of any Security upon request (D) Disposition of System. The City

will not sell please or dispose of the System ; or ; any ; substantial part thereof until all Outstanding Securities have been paid in full as to both principal and interest. (1) This covenant shall not be con-

strued to prohibit the disposition or lease of any property comprising part of the System which is no longer necessary, appropriate, required for the use of, or profitable to the System, or which is no longer necessary to the proper operation and maintenance thereof, or which may be sold and leased back to the extent such arrangement is permitted by law.

(2) Paragraph (1) shall not be con-strued to authorize or permit the sale, lease or disposition of any substantial part

of the System.

(3). The City may at all times in its discretion alter, repair or replace any buildings or structures, make any change in the location of its water mains, pipes, water supply tunnels, aqueducts, pumping stations, and appurtenances thereto, and any buildings or structures therefor as the Commissioners determine necessary for the System.

rtne System. (4) The City will acquire and construct all extensions, enlargements, and improvements to the System promptly in

accordance with the plans therefor.

(E) No Competition. The City will not. and will not to the extent permitted by law, permit others to operate a water supply system that will compete with the System.

(F) Tax Exemption of Securities. The City will take all action and refrain from any action as is necessary, including pay-ing any rebates to the United States government that may be required by the Code so as not to impair the tax exemption of the interest on Securities issued as tax-exempt Securities from general federal and State of Michigan income taxation.

City is the lawful owner of the System; the System is free from any and all liens and 1 encurred and live that it has been considered and the system is free from any and all liens and 1 encurred and the system is free from any and all liens and 1 the shall all finites maintain. The 1 encurred all finites maintain the system in the system is system.

ance with all of the requirements, duties and obligations of the City with respect to the System and the Securities and to perform such other duties as may be provided in a Supplemental Action; provided that no such additional duties shall be imposed on an existing Trustee without its consent: U.S. Bank National Association is hereby appointed as Trustee. The Financial Director is authorized to select and appoint any successor bank or trust company to perform the duties of the Trustee.
(B) Resignation of Trustee. The

Trustee may resign by giving not less than 60 days' written notice to the City specifying the date when such resignation shall take effect, and such resignation shall take effect upon the date specified in such notice provided a successor trustee has been appointed, unless previously a successor shall have been appointed, as provided in subsection (D) below, in which event such resignation shall take effect immediately on the appointment and acceptance of such successor, provided further that if a successor trustee shall not have been appointed the Trustee may petition a court of competent jurisdiction to appoint a successor trustee. (C) Removal of Trustee. The Trustee

shall be removed at any time by an instrument or concurrent instruments in writing filed with the Trustee and the City, and signed by the Holders of a majority in principal, amount, of the outstanding Securities. In addition, as long as no event

of default exists under the Ordinance, the City, upon 60 days notice to the Trustee, shall have the right to remove the Trustee by an instrument in writing filed with the

Trustee. (D) Appointment of and Transfer to Successor Trustee, If the Trustee shall Successor Trustee. If the Trustee shall resign for shall be removed, or shall be come incapable of acting, or shall be adjudged bankrupt on insolvent, or if a receiver, liquidator or conservator of the Trustee, or or conservator of the appointed or its property, shall be appointed or its property or affairs a successor may be appointed by the holders of a majority of aggregate principal amount of Securities then outstanding, in the case of removal then outstanding, in the case of removal by the Holders, or by the City, in the case of removal by the City, by an instrument or concurrent instruments in writing of such Holders; provided, however, that in a case, of such vacancy the Finance Director shall forthwith appoint a Trustee, provided no event of default exists under the Ordinance, to fill such vacancy unless and until a successor Trustee shall be appointed by the Bondholders. At any time, the Trustee may substitute any affiliate, subsidiary, or successor in interest after a merger or consolidation in any and all capacities to which it is appointed hereunder as long as the entity so substitutedis qualified to accept such appointment pursuant to all applicable statutory and regulatory requirements, and any requirements contained in this Ordinance. The rights, duties and substitution of the Trustee shall be governed by and construed in accordance with the laws of the State. If the Trustee substitutes an affiliate or subsidiary as Trustee or consolidates, merges or converts into, or transfers all or substantially all of its corporate trust business to, another corporation or other entity entitled to conduct said trustee business under applicable law, the successor without any further act shall be the successor of the Trustee hereunder, without the execution or filling of any paper or any further act on the part of any of the parties hereto, anything to the contrary contained

herein notwithstanding.

Any successor Trustee shall be a trust company or bank in good standing, within the State, acceptable to the Finance Director, provided no default default 644B Issuance of Gaswittes 14 Elexists, and havino total recorded capital

be such an institution willing, qualified and able to accept the trust upon reasonable and customary terms.

Any successor Trustee appointed here-under shall execute and deliver to its pre-decessor and the City an instrument in writing accepting such appointment and thereupon shall become fully vested with all the powers and duties under this Ordinance The Trustee is it access to act Ordinance. The Trustee, if it ceases to act as Trustee, shall execute, acknowledge and deliver such instruments of conveyance and further assurance and to such other things as may reasonably be required for more fully and certainly vesting and confirming in such successor Trustee all the trusts, powers and duties under this Ordinance and any property held by it under this Ordinance, and shall, after all amounts owing to the Trustee have been paid in full, pay over, assign and deliver to the successor Trustee any

and deliver to the successor, irustee any money or other, property subject to the trusts and conditions herein set forth.

(E) Fees, Costs, and Expenses. All fees, costs, and expenses of any legal proceedings that may be brought by the Trustee to enforce the duties and obligations of the City hereunder or under any Securities and any amounts advanced by Securityholders to the Trustee for such costs and expenses shall be paid by the costs and expenses shall be paid by the City to: the Later of such; Security-holders, or both, as the case may be, in the first instance; from the Net Revenues remaining, in the north of payment, after making, the atransfers, and deposits required by Section; 12 to all Interest and Redemption. Funds

required by-Section, 12 to all Interest and Redemption, Funds (including the Reserve Account, if any, therein), and, to the extent that sufficient amounts are not available from the Revenues therefor, from general funds of the City.

(F) Advancement, of Costs and Expenses. In the event that general funds of the City are used to pay any such costs and expense, the City shall be reimbursed therefor, with interest all the rate of 79 per annum, from the first Net Revenues remaining in the making the transfers and deposits required, by Section, 12 to all Interest and Redemption Funds (including the Reserve Account, if any, therein) and the Reserve Account, if any, therein) and (ii) paying the Trustee or Securityholders

s provided in subsection (b), (G) Reliance of Trustee, Standard of Care. The Trustee is authorized to act in reliance upon the sufficiencies, correctness, genuineness or validity of any instrument or document or other writing submitted to it hereunder and shall have no liability with respect to said matters. The Trustee shall not be liable for any error in judgment or any act done or omitted by it in good faith. In the event of any dispute or question arising hereunder the Trustee shall not be liable if it acts or takes no action in accordance with the opinion

of its legal counsel:

(H) Indemnification of Trustee. In the event the required percentage of Securityholders shall direct the Trustee in writing to exercise one or more of the remedies specified in this Ordinance or in Act 94, the Trustee shall be under no obligation to proceed to enforce or compel the performance of the duties and obligations of the City under this Ordinance unless and until the Holders shall have reasonably indemnified the Trustee for all estimated costs and expenses in the exercise of said remedies, including necessary attorneys' fees.

Section 20. Additional Securities.

(A) Limitations on Indebtedness.

The City shall not incur any obligations payable from Piedged Assets except for Secured Obligations, and no obligations of the City shall be secured by a lien on Pledged Assets except as provided in this Section 20. Ancillary Obligations and related Ancillary Obligation Fees and Expenses may be incurred in respect of such Securities and shall be secured and payable as elsewhere provided in this Ordinance.

(b) Other limitations on the issuance of Securities may be added by Supplemental Action.

(2) Coverage Requirements. The coverage requirments for determining the Required Combined Coverage under this Section are the following percentages:

Priority of Securities 4 . 5 - Percentage 

SRF Junior Lien Bonds
Prior to concurrently with the issuance of a Priority of Securities not enumerated above, this subsection shall be amended to provide for the coverage percentage for such Priority of Securities, but in no case shall such coverage percentage be less than 100. Such amendment shall not require the consent of Holders of any Securities.

(3) Refunding Securities. If any Refunding Securities are to be issued to refund Securities to be Refunded, the Annual Debt Service to be used for determining the Required Combined Coverage, shall be the Annual Debt Service on the Refunding Securities and not the Annual Debt Service on the Securities to be Refunded.

(C) "New Money" and Refunding.
(1) General Authority: The City may issue Additional Securities of any Priority of Lien for repairs, extensions, enlargements, and improvements to the System (including repaying amounts withdrawn, from the Extraordinary, Repair, and Replacement Reserve Fund), refunding all or a part of any Outstanding Securities and paying the costs, of issuing such Additional Securities, including deposits, if any, to be made to any Reserve Account established or to any Reserve Account established or to be established for such Additional... Securities... or any other Securities... or any other Combined Coverage under either the Project Net Revenues Test contained in subsection C(2) below or the Historical Net Revenues Test contained in subsecnet Hevenues lest contained in subsec-tion C(3) below. The determination in a Supplemental, Action that there will be Required Combined Coverage upon the issuance, of such Additional Securities shall be conclusive.

(2) Projected Net Revenues Test. For purposes of determining the Required Coverage Requirement, the numerator is the projected Net Revenues of the System for the then current or the next succeeding Fiscal Year, and the denominator is the maximum composite Annual Debt Service in any Fiscal Year on Outstanding Securities and the Additional Securities to be insued. Securities to be issued.

(i) Projected Net Revenues may include 100% of the estimated increase in Net Revenues to accrue as a result of the acquisition of the repairs, extensions, enlargements and improvements to the System to be paid for in whole or in part from the proceeds of the Additional Securities.

(ii) In projecting Net Revenues, the City shall engage the services of and be guided by a consultant of national reputation for advising municipalities with respect to setting rates and charging for,

the use of water supply systems.
(3) Historical Net Revenues Test. For purposes of determining the Required Coverage Requirement, the numerator is the actual Net Revenues of the System for the immediately preceding audited Fiscal Year and the denominator is the maximum composite Annual Debt Service in

any future Fiscal Year on Outstanding
Securities and the Additional Securities to
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(i) Instead of the immediately preced-

any addited riscal real ending not more than-sixteen months prior to the date of delivery of such Additional Securities.

(ii) If any change in the rates, fees and charges of the System has been authorized at or prior to the date of sale of such Additional Securities, the Net Revenues for the particular preceding Fiscal Year shall be augmented by an amount reflecting the effect of such change had the System's billings during such Fiscal Year been at the increased rates.

(iii) Net Revenues for the particular preceding audited Fiscal Year also may be augmented by 100% of the estimated increase in Net Revenues to accrue as a result of the acquisition of the repairs, extensions, enlargements and improvements to the System to be paid for in whole or in part from the proceeds of such Additional Securities and 100% of any acquisition, extension or connection which was made subsequent to the end of the particular preceding addited Fiscal Year The Fiscal

(iv) With respect to augmentation of Net Revenues, the City shall engage the services of and receiving the certificate of a consultant of national reputation for advising municipalities with respect to setting rates and charges for the use of water supply systems regarding the existence of

such conditions (v) Audited financial statements may be relied upon if no augmentation of Net Revenues is required.

(D) Debt Service Reduction - An Additional Means of Refunding

The City may issue Additional Securities of any Priority of Lien without regard to Section 20C for refunding all or part of Securities then Outstanding and paying costs of issuing the Refunding Securities, including deposits which may made to any Reserve Account established or to be established for such Additional, Securities or any other Securities if, but only it.

(1) the combined Annual Debt, Service

coming due in the current Fiscal Year and each Fiscal Year thereafter until maturity on (A) the Additional Securities and (B) giving effect to the refunding, all Outstanding unrefunded, Securities of equal and higher Priority of Lien is less

(2) the combined Annual Debt Service coming due in the current Fiscal Year and each Fiscal Year thereafter until maturity on all securities of an equal and higher Priority of Lien, without giving effect to the

Section 21. Defeasance.

(A) A Security, is "defeased" for purposes of this Ordinance if:

(1) there has been deposited in trust sufficient cash and Permitted Investments constituting Government Obligations, not callable by the issuer, the principal of and interest on which mature at the times and in the amounts, without the reinvestment thereof, necessary to pay principal of and interest on such Security to its maturity, or, if called for redemption, to the date fixed for redemption, together with the amount of the redemption premium, if any; provided, however, that the sufficiency of the deposit to effectuate the defeasance of a Security shall have been verified by a nationally recognized accounting

(2) if such Security is to be redeemed prior to maturity, irrevocable instructions have been given to the Transfer Agent to call such Security for redemption; and

(3) Nothing in this subsection (A) shall affect any lien securing Ancillary Obligations except as provided in the agreement with the obligee of such Ancillary Obligations.

(B) A Supplemental Action providing for the issuance of Securities may:

(1) provide different means

(2) provide for the Legal Investments that are Permitted Investments for the defeasance of such Securities, but no such Permitted Investments may thereafter be changed except as provided in Section 18; and

(3) provide for the consequences of such Securities being defeased.

(C) Except as otherwise provided in a Supplemental Action:

(1) the Legal Investments for the defeasance of such Securities are the Permitted Investments therefor; and

(2) the statutory lien herein referred to Section 5 shall be terminated with respect, to defeased Securities, the Holders of such defeased Securities shall have no further rights under this Ordinance except for payment from the deposited funds and registration and replacement of such Securities, and such Securities shall no longer be considered to be Outstanding under this Ordinance.

Section 22. Amendments; Consent of Securityholders.

(A) Amendment without Consent. ...

(1) This Ordinance may be amended or supplemented from time to time by Act of Gouncillor Supplemental Action without consent of the Holders of Securities;

(a) To issue Securities of any Priority; (b) To add to the covenants and agree ments of the City in this Ordinance contained, other covenants and agreements thereafter to be observed or to surrender, restrict or limit any right or power reserved to or conferred upon the City (including but not limited to the right to issue Securities or incur other Secured Obligations of in either case, any

Priority);
(c) To make such provisions for the purpose of curing any ambiguity, or curing, correcting or supplementing any defective provisions contained in this Ordinance, or in regard to matters of questions arising under this Ordinance, as the City may

deem necessary or desirable.

(d) To increase the size or scope of the

System; and (e) To amend of supplement, this, Ordinance in any respect with regard to Securities of one or more Priorities of Lien so long as such amendment does not materially adversely affect the Holders of

Outstanding Securities (2) No Holders of Securities of a Priority of Lien shall be "materially adversely affected" for the purposes of this Ordinance by the change of any coverage percentage, established, for Securities of any other Priority of Lien, and no amendment of or supplement to this Ordinance that provides for or facilitates the issuance of Securities or incurs other Secured Obligations of, in either case, of any Priority of Lien shall "materially adversely affect" the Holders of Securities of any other Priority of Lien for the purposes of this Ordinance so long as such amendment does not change any coverage percentage established for such Priority of Lien or is not an amendment that requires the consent of the Holder of such Security under Section 22B(i), or (ii).

(B) Amendments With Consent. (1) With the consent of the Holders of not less than 51% in principal amount of Securities then Outstanding affected thereby, the City may from time to time and at any time amend this Ordinance in any manner by Act of Council; provided, that no such amendment shall:

(i) reduce the aforesaid percentage of Holders of Securities required to consent to an amendment to this Ordinance with-out the consent of the Holders of all

Securities then Outstanding, or

(ii) without the consent of the Holder of

each Security affected thereby:

(a) extend the fixed maturity of such Security or reduce the rate of interest any premium payable on the redemption

(b) change the Priority of Lien of such Security or deprive such Holder of the right to payment of such Security from Pledged Assets.

(2) It shall not be necessary for the consent of the Securityholders under this Section to approve the particular form of any proposed Act of Council but it shall be sufficient if such consent shall approve the substance thereof. The consent of the Holder of a Security shall bind all Holders of any Security for which such Security was the predecessor.

(3) For the purpose of acquiring consent for the purposes of this Section, the consent of a Securityholder acquiring a Security in an offering remarketing tine which the offering or remarketing loricular or other disclosure document fully disclosed the terms of such amendment or supplement shall be considered obtained as if such consents were being solicited under this Section, but no actual consent shall be required, and no more than one such disclosure shall be required.

(4) Promptly after an Act of Council amending this Ordinance pursuant to this Section has obtained the requisite consent, the Finance Director shall cause the Transfer Agent to notify, by mail at their addresses shown in the Registry, or by publication, Holders of all Outstanding Securities affected by such amendment. of the general terms of the substance of such Act of Council. Filing notice pursuant to the continuing disclosure agreement in respect of such Securities shall constitute sufficient notice for the purposes of this subsection."

(5) No amendment may be made under this Section 22(B) which affects the rights, of the sinsurer or cobligee of a Financial Facility or counterparty to a Hedge without its consent.

Section 23. Severability and Captions."

Captions.

(A) If any section, paragraph, clause or provision of this Ordinance shall be held invalid, the invalidity of such section, paragraph, clause or provision shall not affect any other provision of this Ordinance.

(B) Captions of sections and para-

graphs of this Ordinance are furnished for the convenience of reference only and are not part of this Ordinance.

Section 24. Publication Recordation.

This Ordinance shall be published in full in the Detroit Legal News, a newspaper of general circulation in the City qualified under State law to publish legal notices, promptly after its adoption. Section 25. Effective Date.

This Ordinance shall be effective immediately.

Approved as to form:

Adopted as follows:

Yeas - Council Members Bates, S. Cockrel, Collins, Tinsley-Talabi, and President Pro Tem. K. Cockrel, Jr. — 5.

Nays — Council Members McPhail, and Watson - 2.

\*WAIVER OF RECONSIDERATION (No. 1), per Motions before Adjournment. Title to the Ordinance was confirmed.

(1) provide different means of defeasing such Securities, and such thereon or extend the time of payment of means rias and such the properties of the means set forth in subsection (A):

Security of reduce the rate of interest are on extend the time of payment of the properties of the means set forth in subsection (A):

Security of reduce the rate of interest. Page 98 of 98